THE FARMERS' CABINET

DEVOTED TO AGRICULTURE, HORTICULTURE, AND RURAL ECONOMY.

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Communicated for the Farmer's Cabinet.

General Remarks—Vegetables—Food of Plants.

NO. I.

Believing, as I do, that it is the duty of every member of society to contribute as much as he can towards the promotion of the comfort and prosperity of the community, I have taken the liberty of submitting a few desultory remarks on the subject of agriculture, chiefly fiom a hope that it may elicit from others better qualified to contribute to the common fund of useful information.

When we contemplate the period of the transgression of man, that Adam was driven from the Garden of Eden, to till the ground from which he was taken, and that Cain, the first born of man, was a tiller of the ground, we are struck with astonishment to find that so little has been done in the cultivation of correct knowledge in Agriculture, that it can scarcely be considered as a science. The most that we can boast of, is a few insulated facts, many of them contradictory and entirely destitute of rational grounds from which to draw satisfactory conclusions. And when we consider that so much of the comfort of the human family, depends on its improvement, we are led to regret that science has not been more devoted to this subject. Much advantage would result to the agriculturist, from a knowledge of the nature of the soils best calculated to produce vegetation in the highest state of perfection. The substances of which vegetables are composed is also an important consideration, naturally leading to the knowledge of the proper constituents of manures, best calculated to furnish the food of plants. Many substances are used as manures which do not enter into the composition of vegetables, consequently cannot operate advantageously in the production of vegetation.

Vegetables are organized bodies, composed of a few similar simple substances, only differing in their proportions, consequently their difference in organization, which constitutes their difference in form and properties. The cabbage and the deadly night-shade are composed of the same substances, only differing in their proportions. Vegetables receive their nourishment through the medium of absorbents, and thrown into the general circulation, there to be subjected to the various changes necessarily resulting from the operation of the laws that govern the germ of organization, existing in the seed from which they grew, and continues to govern all accession to the plant up to a state of maturity and perfection. Vegetables perform the various functions of respiration, perspiration, the discharge of excrementitious matter, &c. They are also subject to disease and death, consequently proper objects for the curative operation; hence the physiology, pathology, and therapeutics of plants, are subjects that merit much of the consideration of the philosopher. If they were better understood, it would vastly promote the success of agriculture. But very few, even amongst the best practical farmers, are acquainted with the constituents of vegetables; under such circumstances, how can they judiciously judge of the substances best calculated to promote the growth and perfection of plants? Vegetables being immovably fixed in the earth, they are unable to change their position in quest of proper sustenance, hence it becomes necessary that the substances required for their nourishment should be kept within contact of their absorbing roots. In order to accomplish that object, a proper mixture of the

earth is best calculated to produce the effect, by forming a compound sufficiently retentive of moisture, to promote the decomposition of the vegetable and animal matter that may be in their vicinity, and to serve as a solvent to prepare the food to be taken up, be they absorbents. It will be readily understood that soils which are too retentive of moisture, will prevent the necessary decomposition, and will present to the plants more water than is required to preserve them in a healthy state. On the other extreme, soils that are not sufficiently retentive of moisture, in dry seasons, the decomposition will be prevented, nor is there water sufficient to serve as a solvent, to prepare the food for the plants. From what has been said, it appears that soils which are too close, or too loose, are not the best calculated to promote general vegetation. As none of the earths, except lime, can with propriety be considered as one of the constituents of the food of plants, a proper mixture however of some of the other earths is necessary to form a matrix, in which the vegetables are most advantageously sustained.

Joseph Cloud.

For the Farmers' Cabinet.

The Peach Tree.—No. II.

The luscious peach, with blushing cheek,
Graceful, autumnal fruits among;
And healthful, does *experience* speak,
Salubrious food, will life prolong.—*Anon.*

I think I have satisfied the readers of the preceding article, that I have traced the habits of the peach fly successfully; I shall now proceed to show how I have managed to protect my peach trees from so formidable an enemy.

I planted in protected situations near one hundred of the trees alluded to in my first number; having examined and well washed the roots, for if the young worm is now left in the root, or bark near the ground, further care will be thrown away, and generally those which have been standing without care for two years, are unworthy of further attention; and as this tree soon comes to bearing, after planting, it is better to begin by planting the stone, or with trees under, or about two years old—and dig them up to prevent being deceived; plant the young trees with care, leaving the hole in the ground not quite filled up,—then take as much rye straw as may be readily grasped with both hands, for a young tree—cut it carefully, place it evenly round the tree, and bind it well, with three bands of the same; settle the straw well down in the hollow round the tree, fill up the earth round the butts of the straw, and repeat the process annually, and it is safe.

The peach tree thrives best in a new soil; but if the land is grassy where they are planted, put yearly four shovels full of sour tan, from the tan yard, round them; if it is quite acid, it is the better, as it destroys the grass about them and invigorates the tree surprisingly, and is the best article that can be had for that purpose. A handy boy will dress with straw twenty trees, (if they are small,) in one hour. Those trees of mine so dressed annually, continued to flourish fourteen years, with less loss than occured in the apple orchard around which they are planted; of those thus cared for, not more than four per cent. died in ten years, and only one, a neglected tree, was destroyed by the worm. When the bark of those trees by age had become hard, or rigid, say on the ninth year, I ceased to put straw around them, and only put tan around the roots every spring.

They were an inferior lot of trees as to fruit, and were not innoculated, and all of one kind; they blossomed early, and frosts in our limestone land often killed the blossom; the rose bugs were numerous, and some seasons destroyed most of the fruit; and in the dry summer of, perhaps, 1818, they bore remarkably full, there was not moisture enough to support the tree, and mature the fruit—and they declined from that cause all in the next year.

I have about thirty trees of three years standing now; they all appear thrifty and likely to succeed well, confirming all my former experience in the plan I have described.

Note.—A corroborating circumstance, going to prove that the egg, which produces the worm, is laid in the *limbs* of the tree, I add—A peach tree sprung up on the margin of a mill race, belonging to a friend of mine, and as it grew, took an oblique direction over the water in the race, so that the young worms as they dropped off the tree, fell in the stream, and passed away; and it remained uninjured at the root, although all other trees of the kind on the farm, were destroyed by the common enemy. The disease called the yellows, never appeared among my trees.

Samuel Johnson.

Buckingham, 11 mo. 16, 1838.

P. S. So confident am I of the success of this plan, (though I have not the merit of inventing it,) of the culture of the peach, that had I personal ability, I would undertake to furnish plants, and assure to *careful* people, the longevity of the trees for less than the present price of the Morus Multicaulis. I have related facts as they were presented to my view, and should be pleased if others profit by them.

The injuries we do, and those we suffer, are seldom weighed in the same balance.

To the Editor of the Farmers' Cabinet.

The following valuable essay I have had copied from the Quarterly Journal of Agriculture, Vol. VII.; I think the experiments therein detailed may suggest some ideas that will be useful to farmers in the application and economy of manure.

On a Particular mode of applying Farm-Yard Manure.

BY MR. JOHN BAKER, NASSAU COTTAGE, LEEDS.

The present depressed state of agriculture through the kingdom invites the serious attention of all connected with that important branch of industry; it being a lamentable fact that, whilst the most splendid discoveries in science are daily applied to the improvement of our trade and commerce, agriculture as a science, remains almost stationary, notwithstanding individual and national prosperity are so deeply interested in promoting its welfare. For more than 25 years I farmed from 500 to 1000 acres in the county of Norfolk, during which time my attention was carefully directed to the consideration of every method or system of farming which was calculated to increase the productions of the soil, and to improve the condition of that numerous and industrious class of persons who are dependent upon it. The proper use of manure is amongst the most material improvements which I have discovered. By the common, I may say general, mode of managing it, only half the benefit which ought to be conferred on the crops is given, whilst the system which I have adopted doubles the value of all the manure made, and at the same time it really lessens the expense; and it is to this point that I will confine myself in this paper. That "the muck cart is the best farmer," is a maxim as fully acknowledged as it is oft repeated, and believing that upon the proper use and application of it the success of the farmer mainly depends; I have never failed to attend to this important branch of husbandry. Having experienced the practical advantages of my system, as well upon land under my own cultivation at Norfolk, as upon farms belonging to my relations and friends in that county, where it had been introduced at my suggestion; I am induced, at the earnest recommendation of many gentlemen who have also witnessed its beneficial effects in Yorkshire, to invite the attention of agriculturists generally to the subject. Manure of almost every description is carried from the place where it is made, and deposited on a heap for four, six, or eight months, where it ferments and becomes a soft, black, cohesive mass; it is then put on the land and ploughed down, after which the crop is sown: this may not always be done, but something resembling it is the prevailing and general practice in every part of the country. My method, the success of which has been proved by numerous experiments, is to spread the manure on the land as soon as convenient after it is made, except in winter; the manure made at that period of the year remains in the fold-yard till spring, where it does not ferment. The whole is taken in the spring, summer, and autumn, fresh to the land; if in fallow it is ploughed in with a thin furrow; the land is harrowed and ploughed again in a fortnight, and in a fortnight after harrowed and ploughed a third time; after which the muck, however long it may have been, is deduced, and the soil will be in as fine and friable a state as the land is capable of. From the time the dung is put on to the last mentioned ploughing, nothing can be more unsightly than its appearance. If it is to be applied to pasture, I spread it over the surface of the ground from the beginning of spring to the end of autumn. Three essential points are to be observed:— First, to apply the manure to the soil as soon as convenient after it is made (except in the depth of winter); Secondly, to keep it as near the surface as possible; and thirdly, to mix it well with the soil. These being observed, I confidently assert, that advantages, equal to double those now derived from manure are communicated to the land by an increase in the fertility of the soil, exhibited in healthier and more abundant crops; so that a farm of 200 acres of arable land of medium quality, producing 400 loads of dung, or two loads for every acre, worth five shillings per load, will be benefitted to the extent of ten shillings per acre annually, and where more manure is made, which on every well managed farm is done, the advantages will be greater. This result has been produced upon the farm now in my occupation, belonging to Lord Cooper, in the neighborhood of Leeds, to which I entered at Candlemas, 1831; it was then in a most deplorable condition; so deplorable was it, indeed, as to lead many of my friends and neighbors to predict the impossibility of my procuring a tolerable crop upon one of the fields for seven years to come; but this field, from the application of manure according to my method, has become exceedingly productive. I fallowed it for turneps, and in May, (1831) I put on about twelve and a half tons of good fresh made stable dung per acre; as much as possible was taken from the stables and carried to the land the day it was made. My proceedings greatly amused my agricultural neighbors. The preceding tenant observed, that however such a system might have answered in other parts of the country, here it would be a useless expenditure both of time and money, and a great waste of manure. To convince him of the benefit to be derived from such manuring, I directed one piece in the middle of the field to be left with-

out covering. With the exception of the land upon which no manure had been laid, the field produced a very fine crop of turneps, worth at least six pounds to the acre, whilst the crop raised upon the land not manured was not worth six shillings per acre. After the turneps, the field produced a very heavy crop of barley, averaging not less than seven quarters per acre, and in 1833 I obtained a most abundant crop of clover without any manure, except on the land omitted in the first year. I also covered a field of pasture the same summer with the same kind of manure, half of it in June and the rest in August.—Six weeks after the first part was done, I showed it to a very shrewd and scientific gentleman, well acquainted with country affairs, who expressed his astonishment at the improvement. In October, the farmer whose land adjoins my own, said he had never before seen such extraordinary improvement in any ground. Knowing that he was one of those who had ridiculed my system, I hinted to him that the propriety of it had been much doubted. He acknowledged he had condemned it, and said he now saw that which he would not have believed had he not witnessed it, and that he thought the manure must have contained a large portion of white clover and other grass seeds, otherwise, in his opinion, such an effect could not have been produced. In the hottest part of last summer, I covered, in the same manner, the only field on my farm which had not been previously dressed in a similar way, leaving two ridges in the middle unmanured. I removed all the cattle from this field for six weeks, at the end of which, the two ridges had scarcely grass to sustain a goose, while the rest of the field looked like a field of fag or aftermath. Many gentlemen examined it. Some seemed satisfied that much benefit was derived at very little cost; others expressed their conviction that it was the greatest improvement they had ever seen, and it is my firm belief that, from the time the dung was put on to the end of summer, I had at least three times as much grass from the land manured as from the other. I must mention another fact. The man who spread the dung had farmed many years for himself, and might be considered a clever man; he said to me, you would not thus waste manure if you had not the means of getting plenty more. I asked him to wait a month before he decided; he then declared that he had never been so much mistaken. I mention these things, knowing that my plan has much to contend against, and hoping that noblemen and gentlemen, who try my method, may not be laughed out of it before they have applied to it the test of due experience. It may be said that, in these experiments, I did not compare different sorts of manure. I have done so repeatedly, but, in truth, I had then no rotten dung by me. I would propose to any one who doubts the propriety of my plan, to put a given weight of fresh dung on a heap to remain (turning it over or not) for twelve months, at which time spread it over the land, and at the same time take a similar weight of fresh dung of the same kind, and spread it over double the space, and I doubt not the result. Hitherto I have confined the recommendation of my plan to practical experience alone, but I am not without scientific and chemical authorities to support me. Mr. Joseph Hayward's Treatise on the Science of Agriculture is worth reading by the agriculturist who searches after truth. Being aware of the great difficulties with which the farmer has to contend, I should recommend any new system with diffidence, if attended with additional expense; but as the plan I am desirous to introduce, is alike recommended by its simplicity and economy, and also eminently calculated to promote the fertility of the soil, and to secure, by that means, a more adequate remuneration to the farmer, I cannot doubt of its being generally adopted, whenever its practical advantages are more generally known and appreciated. With a view to facilitate its introduction, it will give me great pleasure to correspond with, or to wait upon any nobleman or gentleman, and to explain more fully the details of my method of applying manures, or to assist in introducing the practice upon any farm in hand, either under my own superintendence, or that of my son, who is at this time disengaged, and who is abundantly qualified for such purpose, he having for several years had almost the entire management of a farm of 800 acres in the county of Norfolk, belonging to myself, upon which, as I have before observed, the system was proved to be highly beneficial.—My subject has drawn me on to greater length than I expected; I cannot, however, conclude without saying, that if, by the system I recommend, 10*s*., or 15*s*. worth of manure can be added annually to every acre of land of moderate quality, at no greater expense than by the old method, I think the landlord, the tenant, and the public will be great gainers.

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REMARKS ON THE ABOVE.

BY JOHN PEARSON.

On reading Mr. Baker's mode of applying manure to agricultural purposes, it struck me that he gave no reason why the manure should have the beneficial effect described. The reason appears to me at least to be this, that the manure contained all the essential properties it ever possessed; and though I have no doubt but the mode in question will answer very well where it can be conveniently applied, yet I am disposed to think

that the essential properties of farm-yard manure may be retained and applied to agricultural purposes, under a cleaner mode of application, and with equally good effect to the crop, and very probably more likely to meet the approbation of the farmer. As it is the fashion of the times to decry long established rules and customs before new systems are perfectly modelled, I may safely declare, that it is almost impossible to conceive a more improper receptacle for manure to retain its essential properties, than the generality of farm-yards. Let any reflecting man look into one of these folding yards during a heavy rain in winter, and he will soon observe the drip from all the roofs of the houses collected in a deep pool among the manure. The manure thus lies macerating for several months—but the farmers say that the manure water runs on to the *meadow*—yet I can assure them that grass-roots take up liquid manure but slowly, and the quick succession of heavy rain at that season of the year, does not permit the retention of one-fiftieth part of what the dung has been deprived of. But the next deprivation of essential matter that manure generally undergoes is worse than this, which is, by throwing it up into high heaps to *rot;* but to burn would be a more proper expression. Manure getting both washed and burned, it is not surprising that it is deprived of three-fifths of its original properties. I well recollect, when a lad, of being employed to drag down one of those rotting heaps at the risk of burning my feet, as well as receiving a lasting injury to my lumber vertebræ.

Several years ago I was finding fault with an experienced agriculturist for throwing his manure too thick together, when his answer was, that he always gave his men an extra jug of cider to get them to throw it as high as the barn if they could. I asked, Don't you find the middle of the heap as white as your shirt? Yes, said he, but I never could tell how it was; and added, that it was so dry sometimes that the wind blew it out of the carts. I advised him to save his extra jug of cider, and lay up his manure only from two to three feet in thickness, and not allow a foot to be set on it; but I must not anticipate my remarks.

I think I have made out a sufficient case of condemnation against the present system of management of farm-yard manure; and any farmer that will condescend to try the following plan but once, will assuredly abandon his old practice. The plan is simply this: Let all super-abundant water be kept from the manure during the time it lies in the fold-yard. This is easily accomplished, by having the barns, sheds, &c. provided with spouts to convey the water into drains or into tanks for use. The fold-yards thus rendered comparatively dry, the small quantity of manure water that would drain from the dung would easily be contained in poreless tanks, and applied to the *meadow* at a time when the grasses were growing and the ground dry, both of which would take up the manure before the rains came to wash it into the brooks.

When the manure is put into rotting heaps, never allow them to be more than from two to three feet in thickness, according to the goodness. What is safe guide in this process is, to have a few sticks stuck into the heaps, and as soon as they feel warm to the hand, let the manure be turned and laid a little thinner; and should they get hot a second time turn the manure again. This, in most cases, will be found sufficient, provided the dung and straw have been well mixed during the process of turning; and, in the course of a month or five weeks, the manure will be sufficiently rotten for every agricultural purpose, and retain nearly, if not all, its original properties; and, what is also of consequence to the farmer, it does not take quite so much labor as the old plan of throwing it as high as the barn.

On the Varieties, Properties, and Classification of Wheat.

[Continued.]

ON THE DISPOSITION OF WHEAT, TO SPORT.

Having doubted the general tendency of wheat to degenerate, I will now endeavor to show how such an accident may occur. From careful observation, it appears that some varieties if sown the same day, differ in their period of flowering many days: even ten or twelve intervening. Hence a farmer who might be desirous of cultivating two or three sorts on his farm, by attending to this circumstance, would scarcely stand a chance of intermixing his crop: as fecundation could only take place at the time that each variety blooms.

He might further increase the difference of the period, by sowing the earliest kind on the warmest exposition. Where the varieties flowered at the same period, there would certainly be danger of alteration in a future crop. The knowledge of the period of blooming of every variety should therefore become a science.

It is very extraordinary that some sub-varieties, (they should be called,) have a predisposition to sport, or to alter their appearance. A fine red sort, No. 7, (see the first table, Cab. page 47,) was sown with the others, pure apparently, but to my great surprise, even to that of Professor La Gasca, who witnessed the whole arrangement of it, and classed the

sub-varieties himself, out of three hundred and fifty ears, the produce of forty-six grains, there were two hundred of the original sort, which were a red compact hoary or velvetty kind, twenty-one ears of a smooth red, eighty-six of a whitish downy appearance, and forty-three smooth chaffed white ears. It might be conjectured that the original or parent ear, having been discovered in a field of mixed white, had been impregnated by the pollen of four different sorts of wheat, which the peculiar conformation of an ear of wheat might admit. Professor La Gasca classed the original sort as a seedling.

Another instance of this propensity to sport, I found in a Kentish downy seedling of an unusually square compact form, bearing a fine white plump round grain. I was anxious to propagate this, as it appeared so close and compact in its form, that the wind was not likely to have much power on it; it was accordingly sown in 1833, but I had the mortification to find, that it produced a great number of smooth ears; though there was little difference in the appearance of the grain; I therefore set that produce aside and tried to raise it from a single ear again in 1834, but from 72 grains, whereof 13 died—eight ears were of a smooth sort, so that I considered it incorrigible, and have withdrawn it as a sub-variety, constantly liable to change.

The Talavera, flowering much earlier than any other, is sure to continue pure, unless stray grains happen to be accidentally mixed with it. No. 1, which I call Jersey Dantzic, flowers ten days later, and is very little disposed to change; I suspect, the taller wheats are not liable to be impregnated by the shorter sorts, but the contrary to be the case. It is of consequence therefore to endeavor to keep all those varieties, which are found to answer the purpose required, as far apart from each other as possible.

One sort that I grew close to some others, in the course of experiments, so far from having any affinity for them, actually exhibited a sort of dislike or shrinking, from some of its neighbors; it occurred in a very rare sort, of spring wheat, bearing white grains (most spring wheats bearing liver colored dark grains) this absolutely took a curve, even contrary to the prevailing winds, from a winter wheat planted fourteen inches to its left, and bent towards some rows of spring wheat which were on its right, this last, another variety, showing no predilection or dislike towards either of its neighbors. Hence I am led to imagine, that from some unknown delicacy of habit, it loathed as it were the neighborhood of the winter wheat, and leaned towards its summer neighbor. This was the more remarkable as the periods of flowering of the summer and winter wheats were not the same. I therefore conclude, *spring wheat may be sown with perfect safety by the side of winter wheat, without any fear of intermixture.*

I hold it to be of paramount importance, to ascertain, and keep a note of the period of flowering of each variety to be cultivated, on extensive farms, which will tend more to the keeping up a pure sort than any other method, care being taken also to cause the barn to be well swept, as each sort is finally disposed of.

It may be of no small importance to be able to sow spring and winter wheats at the same time, for it must be clearly understood that many spring wheats will stand the winter, as well as winter wheats, and as they would then invariably flower at different periods, it would be a certain mode of ensuring pure crops; besides attaining another essential object, that of having flour of a moist nature, from the spring wheat, to mix with the dryer flour of the winter variety.

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ON THE EARLY HABITS OF SOME VARIETIES.

It has long been the practice with intelligent farmers, to procure seed wheats from warmer climates, especially those in the north, to whom it is important to obtain seed that may ripen a fortnight earlier than that of home growth.

The chances are, that such wheat having the best and warmest weather to ripen in, will have attained its full state of maturity, hence not only be the most productive in farina, but also the fittest for seed.

I have had occasion, this season, to satisfy myself by observation of the excellence of such practice—through the kindness of the late Secretary to the Devon and Cornwall Horticultural Society, Mr. Hamilton, I was enabled to sow seven grains of the Victoria wheat grown on Dartmoor heath—they were very poor and lean; however five of them grew, throve and ripened among my select varieties. They were sown on the 10th of November, in order to compare the produce and volume of their grain, with some of the same sort, which were to be sown on the 29th of March following—they rose on the seventeenth day, were in ear on the first of June, were in flower on the tenth, and were ripe on the 23d of July.

Those sown on the 29th of March were on a light soil in a warm exposition, they came into ear on the 19th of June, flowered on the first of July and ripened on the 20th of August. The first of these two experiments establishes that it is a hardy variety, as it stood the winter perfectly; the ear and grain is also finer and plumper than that sown in the spring. The term "Tremois" wheat, however, does not apply to those climates which are not sufficiently warm to force the growth so as to ripen it in ninety days;

this having taken one hundred and forty-four to ripen. Two samples of seed wheat from the Cape of Good Hope, one of which I obtained through the attention of Mr. Collier, a Member of Parliament, and the other from a friend to whom it had been sent as a particularly fine sample, for seed, which it really was, led to some interesting observations. I was anxious to succeed in raising wheat from the Cape, as it had been questioned whether wheat which had crossed the line would vegetate—this being stated in "The Farmers' Series, No. 74," of the Library of Useful Knowledge, Article, British Husbandry, chap. x, page 156. "Some fine species have lately been imported from the Cape of Good Hope, and from Van Dieman's Land; but it was found, when sown on one of the finest farms in Bedfordshire, that it would not grow; and it is said, though we know not with what truth, *that 'scarcely any wheat is ever known* to vegetate in this country that had crossed the Line, unless particular care be taken to preserve it from the effects of the atmosphere.'"

Hence it became an object of no small interest to succeed in raising it—it was with great satisfaction, therefore, that I perceived both samples growing freely in November last.

In the Spring, their growth was quite different from that of any other wheat near them, whether from Dantzic, Poland, Carraccas, Essex, or this Island. It was much more upright, bushy, and of a lighter green, and trailed and tillered less. It put on also, a rather sickly appearance as if suffering from the cold. It came into ear on the 26th of May, six days earlier than the Carraccas wheat, but came into flower two days later, on the 12th of June, and only ripened on the 28th of July, five days later than the Victoria wheat, which had been sown the same day.

It is to be observed that, there was much bearded or spring wheat among it, which appears, on first acquaintance, to have nearly similar habits, as the winter wheats it came among, but seems to be very fine. Its real value will be ascertained by comparison with other spring wheats next year.

The sickly appearance alluded to above, in the Cape wheat, was indicative doubtless of a yellow description of smut, that appeared in it in June, which I had never observed previously to infest my wheat; it destroyed many of the grains, some of them being reduced to a mere shell, or skin, containing a small worm.

A most singular circumstance, may be noticed here; I had sown sixty-three drills of this same seed from the Cape, on the 29th of March, in a field having a considerable reclination to the southward—a warm yet exposed situation. A great quantity of the seed perished, but all that rose, had a healthy appearance, of a dark green color, quite different from that sown in the garden; it came into ear on the nineteenth of June, flowered on the first of July, and ripened on the tenth of August, not a single ear was infected with the yellow smut I complained of in the experiment made in the garden among my select varieties. Hence it is clear that, this wheat from a hot climate, when sown in November on flat land suffered much from the cold and wet, where the very same sample of seed sown so late as the 29th of February, on a warm slope exposed to the rays of the sun, found a genial and somewhat similar climate to its own, and succeeded perfectly. It is not unlikely, that the produce of this last, sown with judgment, a little earlier, and in a warm exposition may become a valuable importation, and preserve early habits for more northern climates. Some which was given to me as "Kubanka," a thin liver colored wheat which was exhibited before the Channel Islands Committee in 1835, turned out to be a Spring or bearded variety; it came into ear on the 1st of June, flowered on the 18th, and ripened on the 10th of August. It does not tiller much, and appeared so like barley that I was doubtful what it should be; it was a perfectly pure sample, though much of it died. The Ducksbill, a very productive sort from Kiel, in the Baltic, is said to produce meal fit only for pastry; it is the finest ear that I have seen; a cross with a variety producing a light dry meal would be highly advantageous—its habits are late, as it came into ear on the 12th of June, and flowered as late as the 29th: it, however, ripened on the 6th of August. The Golden Drop, a fine brown eared variety is equally late. This is a very farinaceous sort, probably one of the best of the red wheats, on which as well as on spring wheats I shall treat apart,—my present observations being chiefly confined to white wheats, which are the first in order as to value.

[To be continued.]

We are never out of the view of a superintending Providence, by whom all our actions are scanned. Keep this eternal truth always in mind. Do right, and you cannot fail to be as happy as our defective nature will permit the sons of men to be.

Mere freedom from defect does not constitute excellence, which is in itself a positive quality, yet great defects deform the greatest excellence.

Remember that *labor is necessary to excellence.* This is an eternal truth, although vanity cannot be brought to believe, or indolence to heed it.

To the Editor of the Farmers' Cabinet:

Thorn Fence.

In the last number of the Cabinet there is a communication from a Correspondent from Mercer county, setting forth the importance of Thorn Fences. I fully agree with him that fences have become a subject of great interest with farmers, and will continue to be increasingly so, as timber suitable therefor is continually diminishing; how far the Thorn may succeed in Mercer county I am unable to say; but on my own farm, where it has been pretty extensively tried, as well as on many others in the neighborhood, it has proved an entire failure, which I attribute principally to an insect which deposits its eggs in the branches, producing knots similar to those which have destroyed the morella cherry trees, only not so large, occasioning the death of the branch so affected, which renders it in my opinion useless further to try the Thorn. Where stone of a suitable quality can be easily procured, it appears likely to answer the best purpose; but unless in favorable situations, it is found to be too expensive for general use; we are therefore generally in the practice of using chesnut or white oak posts, with cedar or chesnut rails. Practical farmers differ very much as to which of them is the best—also whether it is best to plant them green, or to have them seasoned before using. So far as an experience of more than twenty years will enable me to judge, I am of opinion that chesnut posts, planted as we say top down, are preferable to oak. I am experimenting on a few of each, both green and dry; but as they have not been planted quite thirteen years, I am unable to give the result as to which will prove the most durable. At present I should give a decided preference to chesnut if any means could be devised effectually to prevent the worms getting into them, which they are very apt to do, near the surface of the ground, especially in the heart of the wood; with me they do not much injure the sap; on that account I prefer the round to the split post. If any of the correspondents of the Cabinet could point out some cheap, yet effectual mode of destroying that property in the wood or sap which makes it palatable to the worm, they would confer a very great benefit on farmers; for I am of opinion that the posts would generally last near twice as long if the worm could be kept out of them. It occurred to me some ten or twelve years past, to try what effect the soaking of them in water a considerable time would have; with the view of trying it I had a hole dug in wet clay ground sufficiently large to contain near one hundred, and filled it with green chesnut posts, which I suffered to be there perhaps a year, when they were taken out and planted; they appear as yet to be of a firmer texture and heavier than others; but what success will attend it, there has not been time to determine, yet from their appearance, I have continued the practice.

My object in this communication is not so much to say what I have done, or to publish my opinions, as to draw forth the experience and better judgment of others, many of whom must undoubtedly have devoted a portion of consideration to this interesting subject; any information through the medium of the Cabinet, which would enable the farmer to make a good, yet economical fence, would be of vast benefit, and would enable them to do what no good farmer is satisfied to omit, that is, having his farm well fenced.

A Montgomery County Farmer.

We thank our correspondent for the hint contained in his private note—his suggestions are good, and we shall endeavor to profit by them.

Spontaneous Combustion.

[The object of the Cabinet is to promote not only the cause of agriculture, but the welfare and comfort of the farmer, to enlighten him on subjects to which he may not have turned his attention, and to guard him against the evils and accidents affecting life and property. In reference to this last point, the following article has been selected from a late vol. of Professor Silliman's Journal of Science and the Arts, by Dr. Mease, Vice President of "the Philadelphia Society for Promoting Agriculture;"* and it would be well for our readers to attend to and guard against the various causes enumerated therein which have led to the production of combustion. Many cotton and woollen factories, and doubtless dwellings and barns have been consumed without the agency of actual fire, which were ascribed to incendiaries.]

In my "Archives of Useful Knowledge," vol. iii. p. 167, I recorded three cases of the spontaneous combustion of large masses of bituminous coal from Virginia, two in cellars, and a third under a close arch, all of which occurred in Philadelphia.† A fourth case

* This is the corporate name of the Society.

† This last was from Dr. Seybert's paper on Spontaneous Combustion, in the New York Medical Repository, Hexade 3d, vol. iii. Two similar facts are given by Bartholdi, *Annales de Chimie*, No. 144: and translated in Tilloch's Philos. Mag. vol. xviii.

was stated of one thousand two hundred chaldrons of coal "in a close compact magazine" in Paris, and a fifth of one thousand six hundred tons of the same article in the royal ship-yard in Copenhagen, and all consumed, together with one thousand four hundred houses. This happened in the year 1794.*

Bituminous coal has on other occasions taken fire. In the year 1822, October and November, three cases occurred of this in the navy yards of Brooklyn, New York, Portsmouth, New Hampshire, and Washington city. The coal was from Virginia, and lay exposed to the air and rain.

In the year 1828, one hundred chaldrons of coal which had been placed several weeks before on wet ground in Boston, took fire, with a volume of sulphurous matter rising in a state of ebullition. It was remarked that this was the third instance of the kind within the past year in that city.

Another case was mentioned in the newspapers as having taken place in Ridgley's coal yard, Baltimore, some years since, in the month of August. This coal also was doubtless from Virginia. A similar accident has recently occurred in the coal yard of Nutter & Co., New York, to sixty tons of Virginia coal. (July, 1837.)

In the month of October, 1837, two thousand bushels of Richmond Coal which had been deposited for some time under a shed on Mr. Lawrence's wharf, in New London, Conn., became ignited. The coal surrounded a post which supported the front part of an open shed. Smoke was discovered issuing from the mass, and on the removal of the coal, the post was found charred. The timely discovery of the fire prevented the extensive conflagration of contiguous wooden buildings.

Mr. Dupont, the late extensive manufacturer of gunpowder, informed Dr. Seybert, that charcoal was also liable to spontaneous combustion when in powder and piled in a heap. He had suffered loss from this cause, and a similar accident had occurred near Paris.

The commissioners charged by the French government to examine into the causes of the explosions of powder factories, ascertained that charcoal in the lump, by attrition took fire. Charcoal inflames according to M. Caussigni, by the pressure of millstones, and has taken fire in the box of the bolter, into which it had been sifted; the coarse powder experienced no alteration.—*Annales de Chimie, No.* 35.

Mr. Sage saw the roof of one of the low wings of the mint at Paris set on fire by the spontaneous combustion of a large quantity of charcoal that had lain in the garrets.

Two instances of spontaneous combustion took place in the powder manufactory of Essone, in the year eight and ten of the French republic; the first in the box for sifting the charcoal, and the second in the charcoal repository. Bartholdi attributes them to phosphorus in the charcoal.

May not one or more of the conflagrations of powder mills, which have taken place in the United States during the two past years, have been caused in this way!

Linen, cotton, and woollen cloth, or the raw materials of these fabrics impregnated with flax-seed oil, or paint, or varnish, have frequently proved the causes of spontaneous inflammation.

Several years since a piece of canvass, forty yards in length, painted with white lead and oil, and exposed to the sun for some hours, was rolled up and put under cover. The next morning it was found smoking, and the whole except a yard, burnt to cinder, with a hole through the bottom of a wagon. This happened at Mount Pleasant, Virginia. A large piece of coarse muslin, thoroughly oiled for the purpose of making covers for boxes, was left over night, folded loosely in a shed in a yard in Market street, Boston; in the morning, it was found burnt entirely through, and about to blaze. (1831.)

A quantity of wool prepared with the usual proportion of oil for carding, and thrown into a heap in the evening, was found the next morning ignited, and the floor to a considerable extent on fire. This happened at Hamlin & Bates' factory; and another instance occurred at the establishment of Warner & Whetton.* Lamp oil was used. (1831.) A quantity of cotton clothing for seamen's suits, had been oiled and hung up at Duxbury, Massachusetts, for a fortnight to dry, and were then taken down, rolled together, and placed in a shed; the next day they were found on fire. (1831.)

The Schr. Hiram, laden with wool, when on a voyage from Bilboa to New York, in March, 1825, was set on fire, in consequence of some linseed oil having been spilt on the cabin floor.

Two pounds of wool greased with flax-seed oil, near Germantown, Pennsylvania, set fire to the building next morning. (1818) The closet in which the paint and oil were kept at Boshor's carriage factory, Richmond, Virginia, having been smeared with linseed oil, burst out in a flame. (1832.)

* In my additions to the article "Inflammation," in Wilich's Domestic Encyc., I have given nine cases of spontaneous combustion from various causes.

* Both at Plainfield, Massachusetts. Ample experience has taught European manufacturers that no oil should be used for greasing wool, but that of rape seed.

Some cotton used in cleaning the cabin of the ship Birmingham, became partially filled with flax-seed oil, and after some time it ignited. An express experiment proved that cotton thus impregnated would inflame in two hours. (New York, 1831.)

Cotton rags, while delivering from the cellar of a store, 24 Broad street, New York, were found on fire. Oil had been spilt on them. (June, 1834.)

Mr. Durant's large balloon, varnished for the first time, exposed to the sun through the day, and rolled up in the evening, and deposited upon chairs in a house in Jersey city, was found the next morning entirely consumed. The varnish was composed of oil, turpentine and caoutchouc. (June, 1832.)

Mr. Atkinson of Ellicott's mills near Baltimore, stated that flax-seed oil spilt on [wood] ashes in an iron kettle, caused the ashes to inflame in twenty-four hours. He made an experiment to test the fact, with success. Mr. Patterson, President of the United States' Mint, repeated the experiment with cold hickory ashes, and one pint of flax-seed oil; in forty-six hours after, the mixture was fairly ignited, and in a short time emitted flame, which continued upwards of an hour. After the flame had ceased, the ignition continued for eighteen hours, and the ashes were then poured out of the vessel. (1820.)

A canvass recently painted with flax-seed oil, and then dried and rolled close, took fire after being three hours exposed to the sun on the deck of the Schr. Olive, at Troy, New York. (August, 1820.)

A piece of old packing-sheet, which had lain long about an oil and color warehouse, and was besmeared with different kinds of vegetable oils, on being thrown behind some casks pretty much confined from the air, inflamed.—*Edinburgh Phil. Jour.* vol. vii. p. 219.

A cask of oat meal left from May to August in a kitchen in Glasgow, caught fire and was totally consumed together with the barrel.—*Thomson's Annals*, vol. xvi. p. 390.

A parcel of hops well dried, were put into a home-spun cotton gown and placed on a heap of cotton seed; after three months they inflamed. Cotton it was remarked has frequently been known to take fire spontaneously in a moist and heated atmosphere.—*Milton, N. Carolina paper.* (1824.)

Certain ochres ground in flax-seed oil, inflamed during the act of trituration.

Alder charcoal has taken fire in the warehouses in which it was stored.* One of sixty-three casks of lampblack on board the ship Catherine, bound to India from England, ignited, but was discovered by the fumes before it had burst into a flame.—*Old Monthly Mag. Lon.*, 1827, p. 91.

Wet Cotton.—The ship Earl of Eldon, in August, 1834, was set on fire, by reason of having shipped cotton in the rain at Bombay.

A similar occurrence took place in 1836, on board a vessel which had taken in cotton at Apalachicola, Florida, during rain.

A piece of red cedar about two ounces in weight, broken in two, and laid upon the shelf of the store of Mr. Adam Reigart in Lancaster, Penn. inflamed after two years had elapsed, in June, 1834. It was part of a tree found in excavating the deep cut of the rail road, at the "Gap in the Mine Ridge," Lancaster County, thirty feet below the surface. The combustion was proceeding so rapidly, that the shelf would have been in a few minutes on fire, and it evidently commenced in the interior of the wood, as some of the outer fibres were sound.—*Hazard's Register of Pennsylvania*, vol. xiii, p. 399.

Haussman relates that several dozens of skeins of cotton, dyed red, and impregnated with an alkaline solution of alumina, with excess of boiled linseed oil, were placed on a straw-bottomed chair, under a window, and at midnight they inflamed.*

A heap of horse manure inflamed in the month of May, 1822, at Sharon, in Connecticut. The fire was two feet in circumference. *American Journal of Science*, vol. v. p. 201.†

That manure will take fire spontaneously is rendered probable by a recent occurrence in Baltimore. In the "Patriot" newspaper of that city, of September 26, it is stated that "the alarm of fire on Sunday, was occasioned by spontaneous combustion in a deposite of manure from the stable on the rear of the premises of Edward Patterson, Esq., in South Gay street, near Market street. The situation of the place forbids the idea of any other origin; and it was generally believed by those who saw it to be a case of spontaneous combustion." Who that reflects upon the chemical contents of stable manure can doubt that it contains the principles of combustion?

It is a miserable thing to be injured by one of whom we dare not complain.

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* B. G. Sage. Walker's Archives, vol. iii., p. 80.

* His theory of this is as follows: "In all cases where the oxygen of the atmosphere is rapidly attracted and absorbed, the caloric, which serves as a base to the oxygen, giving it the qualities of gas, or elastic properties, is disengaged in such abundance, that if the absorbing bodies are susceptible of taking fire, or if combustible bodies are in the neighbourhood, a spontaneous inflammation will take place."—*Annales de Chimie, No.* 144. *Tilloch, Vol.* 18.

† It appeared subsequently, that this case of supposed spontaneous combustion was the work of an incendiary; the communication of both facts was from the same person, a respectable physician.—*Editor.*

For the Farmers' Cabinet.

Weights and Measures.

"Divers weights and measures are an abomination."

The subject of establishing by the Congress of the United States an uniform standard of weights and measures for the whole confederacy, is a matter of great importance to the agricultural and commercial interests.—Most of the States, perhaps all, have legislated on this very interesting, important and difficult subject, and it is obvious from the results of their disjointed labors, that there is still room for the exercise of the skill, judgment and science of the most learned men in the nation, to reduce the chaos to order, and to prepare a uniform system, founded on scientific principles, for the use of the whole nation.—Much confusion and loss must be sustained by the great discrepancies which exist in the weights and measures in use in the different states, which are in habits of constant commercial intercourse.

On an examination of the learned and able report made by John Quincy Adams, to the Senate of the United States in 1821, and that made by F. R. Hassler to the same body in 1832, on this subject, it does not appear that the bushel in any two states contains the same number of cubic inches, and some of them differ materially from each other; the weights also are variant, and the measures do not always correspond with each other. In Pennsylvania the Winchester bushel, 18.5 inches in diameter and 8 inches deep, and containing 2150.42 cubic inches is understood to be the standard dry measure; one eighth of this or 268.8 inches is a gallon, and 67.2 cubic inches the quart, dry measure. The ale gallon is 282 cubic inches, and the quart 70.5 inches; and this is understood to be the quart by which dry articles are measured. The wine gallon, which is also the measure of all spirituous liquors, contains 231 cubic inches, and the quart 57.75 inches. The reason for these differences is not sufficiently apparent to be recognized by any person of ordinary understanding, but they are calculated to produce much embarrassment, and not a little fraud, for there are always persons who are disposed to sell by the smaller rather than the larger measure. In England, whence we obtained all our standards of weights and measures, a better system has of late years been adopted, by which the pint, quart and gallon, for wine, ale, beer and grain or corn, measure the same with regard to magnitude; eight of these gallons make one bushel; and one gallon contains 277.274 cubical inches, or ten pounds of distilled water at a temperature of 62 degrees; and the imperial bushel 2218.192 cubic inches or 80 pounds of water at 62 degrees.

From the above it appears that the English bushel at present in use contains 67.772 cubic inches more than the standard bushel of Pennsylvania; and if it would be of any service and would not intrude on the other matter intended for your valuable journal, I would furnish the dimensions of the bushels used at the different custom houses in the United States, and display the astounding fact of their total want of uniformity; but perhaps enough has been furnished to induce your intelligent readers to reflect on this very important subject, and if it should induce them to make an effort, to have returned as members of Congress, the wisest and the best men in the nation, we may thus reasonably hope for some rational and scientific legislation on this subject, that will benefit all classes of the community, and particularly the farmers, whose interesting business it is to feed and clothe the whole people. C.

Please furnish us with the statement; it will doubtless be satisfactory to many of our readers.

Visit to the Farm of B. V. French, Esq.

MOUNT MONATIQUOT, BRAINTREE.

We have had the pleasure of a call at the farm of B. V. French, Esq. of Braintree, who is well known to the Horticultural community as a gentleman who has devoted much time to the cultivation of fine fruits, especially the pear and apple. His farm contains about 160 acres, naturally a cold unpromising soil, but by good management has been brought into a highly productive state. The improvements made upon it since it came into his possession, about 14 years, have been very great, and consist of clearing the ground of stones, draining, walls, gates, barns and other out buildings, and cellars for fruit, vegetables, manure, &c., and above all in the extensive collection of choice fruits. These improvements have been accomplished by a steady system of operations, giving evidence of the perseverance and skill of the operator. His orchards cover an extent of 23 acres; most of the trees have been planted by his own hand. Not only have the principal nurseries of the United States, been laid under contribution for their choicest varieties, but those of France, Germany, and England have also contributed to make his assortment complete. In one field we were shown 140 standard pear trees of various sorts, many of them in a bearing state. Some of the apple trees we should judge, would produce the present year four or five barrels each. Some of the Baldwins presented as beautiful a sight as any thing of the sort we have ever seen, loaded with their showy fruit so heavily, that it had been necessary to prop

them up, to prevent the destruction of the trees; even the sight itself, richly repays all the pains that have been taken to rear the trees. In looking over his orchard, and calculating the probable increasing annual profits, which may reasonably be expected for an age to come, we could not help wondering at the indolence and want of foresight in many of our farmers, in suffering fruit of a worthless character to remain to encumber the ground, when every healthy tree, however unpalatable its fruit, may be transformed by engrafting, in three years time, into any desirable variety; or if necessary to set out young trees they may lay the foundation for a handsome income in their old age, or at least to do much to benefit those who succeed them. Although pears and apples have received the principal attention, his place is well stocked with cherries, peaches, plumbs, quinces, &c. We were pleased also to observe, that while he has bestowed much attention upon fruit, the kitchen garden has not been neglected; but every vegetable desirable for the table had its appropriate place.

Mr. French does not pretend to have much taste for flowers, yet he has set off a generous portion of ground which is devoted to their culture, well laid out, and well stocked with plants; but over this he holds no dominion; this he leaves to the management of the ladies. This is all right, every intelligent farmer will encourage floriculture, and esteem it a pleasure to gratify and encourage a taste so pure and pleasing as the culture of flowers; and if he takes no delight himself in ornamenting his grounds, he will not prevent his wife and daughters from performing the pleasant task, by withholding the necessary funds and labor.

In the garden we noticed a neat apiary, but were sorry to learn that the bee moth had been very destructive to his bees. We were shown a board, the top of a hive, or some part of it, which had been pierced like a riddle by these voracious vermin.

The poultry are well accommodated with a capacious yard, which appears to us much more economical than to let them run at large, destroying twice their value in the garden, besides the vexation it occasions a man to see them scratching up his plants.

His whole farm is enclosed with a substantial stone wall, and some portions upon the road are handsome faced. All his mowing lands and orchards are accommodated with gates, hung upon stone posts, and built in the nicest manner and so fixed that there is no danger of having any trouble from their swagging. With Mr. French's permission we design to give a more particular description of his gates illustrated by plates in some future number, as we do not often see them that open and shut, so easy, and secure after they are shut as his.

The main pasture is divided in the centre by a stone wall, and each of the divisions is subdivided into three equal portions. The cattle are turned into each in succession, thereby making the most of the pasturing.—In every department we witnessed the great advantage of system. A small river runs through this farm, known by the name of Monatiquot river—affording him a good mill privilege, plenty of water for cattle, accommodations for ducks, geese, &c. and adding much to the interest of his place.

In his efforts to raise wheat the present season he has had a complete failure, although a liberal application of lime and other manure was made, and the best variety of seed procured, yet he has had the mortification, after his field has exhibited the most flattering appearance, to see the whole of it blight, and totally fail; but having sowed a liberal allowance of clover seed, (at the rate of 22 lbs. to the acre,) he will not have occasion to say that his labor has been wholly in vain.

Our farmers do not generally allow sufficient clover seed to the acre, and are thereby great losers. The English sow from 20 to 28 lbs. where clover alone is sowed. In this case no other seed was sown. We have never seen a more promising field of clover.

The unfavorable season for the last two years, and the failure of the corn crop in consequence, has led the agriculturists to seek for an earlier variety. There was a geat enquiry in a particular manner the last spring for seed corn. Mr. French among others turned his attention to the subject, and fancied if he could procure the genuine golden Sioux from the north it would prove the variety wanted; this he procured with some difficulty; but not fancying it, he rejected it, with the exception of enough to plant one row. It is probably the same as the Dutton, but the specimen he obtained was much inferior to what is grown among us. He procured also some of the Parker corn, so called, a beautiful variety to look at, with long ears, eight rows, and very large kernel. He planted about one half his field with the Parker corn, and one half with the Dutton, with the exception of the one row of Sioux. Part of the Dutton corn was soaked in saltpetre water, the other was not; there was a striking difference in favor of that which had not been soaked.—After examining critically the Sioux and Dutton, we do not hesitate to pronounce them to be the same originally; our Dutton is an improvement upon the Sioux, and we believe that after all that has been said, the Dutton is the most desirable variety, and shall recommend it before the Parker, or any other sort we are acquainted with, for our country.

We noticed an abundant supply of agricultural implements and tools of every description. The order in which they are kept is worthy of imitation. Even when there is a house for tools, as there is, or should be on every farm, we often see the implements and tools thrown in promiscuously, without order, and to get at some particular tool, the whole must be overhauled; but here, we saw a room of ample dimensions, with a place for every thing—all arranged in order; the shovels, hoes, forks, rakes, &c. in separate racks; the ploughs, well cleaned, by themselves, and every article ready for service; a person acquainted with the room might place his hand upon any thing that was needed in the darkest night, if desirable.

As we were about to leave, Mr. French introduced us into his library, and here we saw the secret spring which moved the operations without. We had the evidence before us that he is guilty of book-farming. We saw the place where his long winter evenings are passed, and now we were almost moved to envy. We noticed upon his table all the prominent agricultural periodicals of the day, and on his shelves were displayed a rare collection of agricultural books; the most conspicuous was the N. E. Farmer, in 16 volumes. After giving the library a hasty glance we were compelled to leave, regretting that we had no more time, as we might have spent half a day with much pleasure in looking over his books, and various curiosities with which his room is enriched.

As we returned home, we could not but reflect upon the importance of a steady, well directed system of efforts on the part of the husbandman, and how much may be accomplished by patience and perseverance guided by knowledge, in the course of a few years. —*New England Farmer.* J. B.

For the Farmers' Cabinet.

The following communication "on the culture of potatoes," was presented some years since to the Agricultural Society, and it is thought the publication of it in the Cabinet, so as to give it an extensive circulation, would be useful to those who may be desirous of raising a good crop of potatoes at a small expense of manure.

Rockland Place, 6 mo., (June,) 19, 1820.

Gentlemen,—Any discovery made, substituting a substance in the place of barn yard or stable manure, that will operate equally well in promoting the growth of a valuable esculent for the table, at a much cheaper rate than said manure, I am of the opinion ought to be generally known, and, therefore I have been induced to state the result of an experiment I made last year in the culture of potatoes; substituting rye straw, in the dry state, on a part of them in the place of stable manure.

The seed potatoes were first dropped or placed in the furrows, the usual distance apart, say ten or eleven inches; a moderate quantity of straw was then spread immediately on them; after which, the potatoes and straw were covered with the soil, by means of the plough, in a similar manner to those planted with the stable manure, and their treatment the same during the season. The strawed and manured potatoes were both planted on the 19th of the 5th month, (May,) and on the 21st of the 10th month, (October) following, I had the produce taken from the ground; and as the season throughout had been remarkably dry, as is well known, I was surprised to find (presuming that a wet season would have best suited the dry straw) that my straw potatoes were quite equal in quantity, quality and size, to those in which I had been liberal in the application of stable manure. The nature of the soil on which the potatoes grew, is about the medium between a light and heavy loam. Encouraged by my success last year, I am again trying the straw on a more extended scale this season. I should like others to try it, and on different descriptions of soil.

I am with sincere respect,

ISAAC C. JONES.

Straw being a bad conductor of heat, and it being pretty well ascertained that potatoes do best when on a northern exposure, or when they are protected from excessive heat, this may in part explain the reason of the benefit derived from covering with straw. A farmer in Montgomery county, some years since, put *lime* pretty copiously in the furrows of part of his potatoe ground, dropped the seed upon it, and covered in the usual way; the other part of the lot was planted in the common manner without lime: when they were dug, the rows that were limed were unexpectedly found to yield more than twice the quantity of the other rows where no lime was used.

I am induced to state this fact from seeing in the last number of the Cabinet, page 162, a similar one stated, taken from a northern paper. It is hoped some of our agriculturists the coming season will make trial of liming in the rows, and let us know the result of the experiment of covering with straw. Some think it best to put the manure on the top of the sets, and not under them; this is easily tried. The application of marl to potatoes has long been known to produce astonishing results, and it is confidently affirmed that the quality, as well as quantity, of them is much improved by it. O.

For the Farmers' Cabinet.

Dialogue between a Father and Son.

AGRICULTURE AND HUSBANDRY.

Frank. I have been reading the history of the Island of Jersey. That must be a beautiful spot, and if the observation be correct, that high rents make good farmers, they must be first rate, that's certain: $25 an acre rent, must make good managers too—their *Husbandry* must be equal to their *Agriculture.*

Father. I am glad to find that you have not forgotten the definition of the terms, Agriculture and Husbandry.

Frank. I should be sorry if I did not remember, that Agriculture is the art of raising crops; Husbandry, the art of preserving and expending them.

Father. Very well: and now for some account of both, as they are practised in that *School* of *Industry*, as it might very properly be termed. My observations are the result of five years residence, during which I had the happiness of enjoying friendly communication with many of the first agriculturists in the island.

Frank. I have heard that many of their farms are not more than a few acres, and sometimes consist of one field only: how do they contrive to obtain the means of existence from so small a quantity of land?

Father. Generally speaking, by selling their produce and living upon the refuse. They eat very little animal food, a standing dish with the poorer sort, being cabbage leaves cut small, and boiled in water; and when done enough, hog's lard is added, and it is then eaten with bread made of barley and wheat flour. All their farms are small; my first introduction was to the largest farmer in a whole parish, who occupied thirty-six acres only; he did not conceive that any man could possibly manage more; and when my friend told him I had known farms of 1000 acres, he replied, "Oh, he mistakes, he means 100!" As you say, many of their farms consist of one field only, yet upon this, they contrive to raise almost all the different crops; first a strip of wheat, another of barley, and another of oats; always one of parsneps and the English bran, mixed: then their indispensable potatoe crop, with beans planted at wide intervals; a strip of clover, or hay for their next years wheat tilth, and present keep of the cow, and sometimes a small patch of Lucerne. Their gardens yield them vegetables, amongst which is the Jersey kail, which grows to the height of eight or ten feet, throwing out broad leaves, which they strip during the whole summer, and these are fed to the cow, to the pigs, to the weaning calf, and to themselves, indiscriminately; the quantity of food which they yield is truly astonishing, and it is peculiar to them to flourish about as well under the shade of trees as in the open ground—a fortunate circumstance, as the whole island might almost be considered one vast apple orchard, from which an incredible quantity of cider is made for exportation.

A great part of their wheat is sold at the market, in measures called cabots, containing about half a bushel each; and they have a very simple way of separating the finest portion of the crop for this purpose, which is, by taking every little sheaf, and giving it a few strokes on a barrel lying on its side; these sheaves are then laid by, to be clean threshed by the flail at some future time, and this is always done by lamp light, during the winter evenings! This inferior wheat, mixed with barley, furnishes their own bread. The beans and oats are ground together, and fed to their fatting hogs; they are at first fed with parsneps in their raw state, afterwards these are boiled and mixed with bran, and then comes the finish of oats and beans. Their pork is generally sold at the market, the head, feet, entrails and lard, being kept for home consumption. Their potatoes supply them with a great portion of their food, as also the cow, pigs and poultry; but the chief part of these are sold for exportation, to the Brazils, as well as to England, as they are noted for their excellence.

But what they most value themselves upon is, the management of the *milch cow*; she is the darling of the family, and no wonder, for upon her they seem to depend for life and breath and all things, and if ever the Jerseymen become idolaters, they will assuredly worship *the milch cow.*

Frank. I have heard that those little cows which are called Alderneys, are brought from the island of Jersey, and that none are allowed to be exported without a printed certificate, describing age and color, by whom bred, and to whom sold, and that all this is attested before a magistrate, who signs the document.

Father. All this is true; and by these means they have preserved the breed pure and unmixed, a matter of great consequence to them: it is hardly credible what a great number of these cows are exported to England every year, where, if they are very handsome, they bring great prices. They are a most valuable breed for the dairy, and astonishing accounts of their produce of butter is well attested—two, on high keep, in the neighborhood of London, gave nineteen pounds of butter each per week! Every farmer therefore, rears a heifer every year for the English market, and this system alone, has been the means of raising a fortune to many a poor man in that place where, if a

man has more than he expends he is accounted *rich;* and this is the proper acceptation of the term, *riches*—not what a man *spends*, but what he *saves*.

Their *agriculture* too is excellent: they never fallow, nor do they ever sow wheat but in the spring, and yet, while the average of this crop for Devonshire is sixteen bushels per acre only, and for the Isle of Wight twenty-one bushels, the average for Jersey is thirty-seven! Their average crop of potatoes is 29,077 lbs. per acre, and of a quality superior to all others: but this superiority in quantity and quality is owing, first, to their excellent soil, and then to their system of spade labor, and after that to the culture bestowed by their plough, which, although heavy and awkward in appearance, is remarkably well adapted to their fine deep soils.

Their chief wheat tilth, is hay land or clover stubble; this is skim ploughed late in the autumn, or during the winter; early in the spring it is well harrowed, and upon this is spread dung or compost, or the ashes of sea weed, and it is then turned down by a very shallow furrow, the plough, on repassing, taking a deeper furrow from the bottom of the trench, and turning it upon it; thus the land is, properly speaking, *trenched;* and upon this is sown wheat, three and a half bushels per acre, a very large quantity of seed, but as there is not time for it to tiller or spread, as winter sown wheat is expected to do, it is necessary to sow very thickly. I have no where seen crops of wheat so thick and free from blight, which I attribute to sowing on a highly manured seed bed, the crop coming up and growing away so rapidly as to defy the ordinary cold blasts of spring. I have known the crop ripe in little more than three months from the time of sowing, even with wheat of the common red and white species; while the kind known as the French *tres mais*, (three months,) the real *triticum cestivum*, is often cut in that time. I should say, in Jersey they never turn down whole surfaces, but skim plough them, let them lie for a time, well harrow the sod, and turn it down, either by a shallow or a thicker furrow: but this mode would be impracticable by any but such a plough as the one they use, the fen or wing of which is attached to the mould plate, and cuts to the width of fourteen inches; the whole instrument being very heavy.

As they keep a large stock of cows and calves during the winter, it is necessary that they should be provided with food for them; and their management for a full crop of turneps is excellent: immediately on carrying their first crop of clover hay, they skim plough the land, harrow the sod, dress it with compost, and turn it in as above described, and sow turnep seed broadcast; and I have never witnessed finer crops: they are partial to the *tankard species*, which come to an amazing size. Thus, in exchange for a precarious second crop of clover, they secure a mountain of roots, for the support of their stock during the whole of winter, and the land is in the finest order for a spring crop, always wheat, often seeded with clover.

Frank. The large quantities of sea weed, or braik, as it is called in the history, must add amazingly to their stock of manure, without adding at all to the growth of weeds, a lamentable evil, where much stable and barn yard manure is used; I should suppose they would also be lasting in their effects.

Father. The sea braik, as well as the ashes from it, are in universal request, but their effects are exhausted the first year; there are, however inexhaustible supplies; not a storm arises, but the shores are covered with them, rolled into heaps, in some places as large as their carts. A great many families residing on the sea shores, obtain a living merely by drying and burning them for their ashes, which they exchange with the farmers for wheat and barley. But the chief supply is obtained from the rocks, with which the island is entirely surrounded: these are not permitted to be cut oftener than twice a year, in the spring and autumn; the precise time being declared publicly in open court, and then the period is limited to a few days only, during which time, however, all is hurry and bustle; every horse and cart is put into requisition, and thousands of persons, of all ages and both sexes, rush towards the sea; and in a very short time in the spring cutting, every meadow is covered with the black weeds, as well as a great portion of the arable land; and if rain falls immediately, they dissolve into a jelly-like substance, and wash away; if no rain falls, however, they dry up, and are then raked off, to be burnt for their ashes; in either case the effect is instantaneous, the grass grows remarkably quick, nor is it so liable to be affected by a season of drought; its quality too, partakes of the nature of that from salt marshes. On their arable land, these weeds are immediately ploughed in, by means of their fine plough, which turns the land *topsy turvey*, and oats and barley, and other crops, are sown on a soil which, every morning, for a long time after, is found reeking like a hot bed, occasioned by the fermentation of the sea weed.

The autumn cutting is used chiefly as fuel for the winter, being dried and stacked near the house for that purpose; the ashes being carefully preserved in some dry place, for the wheat crop in the spring.

Frank. I have heard that meat, smoked

with sea weed, acquires a very peculiar flavor, very unlike that cured by the smoke of wood, and that it is much sooner cured, a few days being sufficient for the purpose.

Father. It is true, and this difference might, in a measure, arise from the circumstance, that the alkali from sea weed and all other marine plants, is *soda*, while that from wood, and all land vegetables, is *pot ash;* they also contain much animal matter, as well as marine salt; certain it is, the smoke which arises during their combustion, is much more pungent than that arising from the burning of wood.

Perhaps the Island of Jersey is one of the most fertile spots in Europe; its climate too is proverbially healthy, although it has the character of being very moist, many persons declaring that it rains there 300 days in the year; these rains are, however, chiefly confined to the nights, the succeeding days being bright and sunny. This circumstance has, however, compelled them to adopt a peculiar mode of management in the saving of their crops, which it would be well to adopt in many other places: none of their grain is permitted to lie abroad after it is cut, even for a single night; it is carefully tied in sheaves, and is built up into small stacks in the field, every evening, so much as has been cut during the day; and here it is permitted to remain until it is perfectly dry, when it is removed to the barn; they, however, adopt the same mode with their hay, which is improper, for the removal of these stacks, puts a stop to the fermentation of the hay, and is highly detrimental to its quality.

Frank. I have heard that in Jersey there are no taxes; that their own magistrates frame the laws, and that the government is independent of England—that it is, in fact, a little republic!

Father. In some respects it is—much that relates to it is peculiar and extremely interesting, and I shall feel pleasure in renewing the conversation at some future opportunity. In the mean time we must practice what we preach; we must make hay while the sun shines. J. P.

[See page 26 of the present volume of the Farmer's Cabinet.]

The working classes are the pillars of the Constitution. When those pillars become incapable of sustaining the superstructure, it must fall, and great will be the fall thereof. Let the working classes lay this to heart. Let them remember that on them devolves the responsibility of sustaining this grand and beautiful fabric. Let them remember that when that fabric falls, they too must fall with it, "and be trodden under the foot of men." Let them remember that from this fall there can be no resurrection.

For the Farmers' Cabinet.

Some Account of the Mode of Fattening Calves in the Neighborhood of London.

BY MR. MAIN, CHELSEA.

Supposing that the following account of the mode of fattening calves near London, might interest and perhaps instruct some of the readers of the Cabinet, I forward it for insertion. C.

Local circumstances must determine the grazier or farmer whether he shall turn the milk of his cows into butter or cheese, or into pork, bacon or veal. For the last mentioned purpose he must be near a good market, where there is a constant demand for butchers' meat of this description. If at too great a distance, the expense of carriage (because fat calves cannot, at least should not, be driven) deducts too much from the profit, and is often otherwise inconvenient. So much does the circumstance of distance from market govern the trade, that the whole country round London is divided into *zones*, in each of which the different business of milking, calf and house-lamb fattening, butter making, cheese and pork fattening, are carried on. Milking, for the supply of the metropolis, is carried on within a circuit of six or eight miles from the city, either by cow-keepers in the vicinity, who have establishments for that purpose, or by farmers, who send the milk in large upright tin cans, by spring-vans, to the retailers in town. Beyond, and surrounding this circle, lies the veal and lamb suckling country, extending from ten to thirty miles. Still farther off is the fresh butter district, extending to the distance of seventy or fourscore miles from London, numerous heavy broad wheeled wagons being employed to bring up the butter and other provisions weekly, and load back with goods of all descriptions. Every farmer in the suckling district, keeping from six to a dozen cows, or more, makes veal of all his milk. By proper management of his cows, and by selling off barreners, and buying in calves, he always contrives to have a flow of milk, to the quantity of which, the number of calves are apportioned. The byers or cow-houses are single or double; if the former, the building is wide enough to admit a rank of calf-pens being fitted up behind the cows. If it be a double cow-house, the pens occupy the centre from end to end, between the stalls or standings for the cows.

The calf-pens are boarded inclosures, but no larger than will just allow the calf to turn within; the sides and partitions are seven feet high, the floor boarded and pierced with holes, and raised at least one foot above the earthen floor of the inclosure, for the purpose of keeping the pen dry and clean, as much depends on cleanliness, and frequent clean wheat straw for the calf to lie on. There is a little box or manger in every pen, in which is kept a

lump, or some pounded chalk, for the calf to lick. This is supposed to counteract the tendency to inward fever, which suckled calves are often subject to.

Every cow is made to suckle her own calf three times a day, for the first three or four days after calving, and afterwards constantly twice a day. If she has a very full stock of milk, another calf about the same age is also put to her, in order that her udder may be perfectly emptied at each milking. Her own calf must, however, always have its full, and not be robbed by the other. If a calf goes on thriving and well, it will be what is esteemed in England *prime veal* in about ten weeks, and will, at the end of that time, weigh from seventeen to twenty stones of 8 lbs. each, and will fetch in Smithfield market from 4*s.* 6d. to 5*s.* 6*d.* per stone, according as veal is more or less plentiful.

It is not the largest or heaviest calves that fetch the most money; one of fourteen or fifteen stones, if of the proper age, and as complete as to fatness as possible, will sell for a shilling or two per stone more than a calf weighing between twenty and thirty stones.

Notwithstanding this well known fact, some farmers are of opinion, that as a calf grows and fattens faster after it is ten weeks old than before, and also requires less milk to keep it improving, there is really more clear profit made from a calf of twenty-five stones, than from two of fifteen stones each. There is only the prime cost of one, say they, and one commission for selling; whereas there is in the other case two first costs and two commissions to be deducted from the first amount.

Farmers living at the distance of from fifteen to thirty miles from London send their fatted calves to market by a salesman, who keeps horses and covered spring-vans for the purpose. Each salesman has a tract of country which he frequents, and where he is well known. His van calls twice a week at the farm houses on his route to market, to take up the fatted stock. This is sold in London early on the morning of the next day. In the evening he repasses homeward, leaving the amount of sales at each of his employers, enclosed in a printed market-bill, with the name of the purchaser, and the amount as stated by the clerk of the market, to whom the money is in the first place paid. The salesman's commission for carrying and selling a calf from a distance of twenty miles is 5*s.* and one shilling additional for every pound sterling above £5 the calf may fetch.

The veal sucklers are supplied with calves by another class of men called calf dealers, who travel in carts built for the purpose into the dairying countries, and they buy up all the young calves to be disposed of. These are brought up by hundreds every week into the suckling districts, and sell at prices varying from 20*s.* to 35*s.* per head, according to their age, size, or breed. The London cow-keepers also sell all their calves as soon as dropped; these are carried to Smithfield, and bought by another class of calf dealers, who carry and dispose of them in the country. The whiteness as well as the firmness of the veal constitute its principal value when dressed. Some breeds have whiter fleshed calves than others, and they are most valued by butchers, who judge of the color of the flesh by looking at the inside of the mouth and white of the eyes. The butchers also bleed the calves repeatedly before they are slaughtered.

The prospect of fattening calves may be judged even by an example in figures, which I have often experienced. A calf is suckled for ten weeks, and weighs from eighteen to twenty stones, sinking the offal, as it is called about London. The calf fetches £5 at market, from which, deducting 30*s.* which it might have been sold for a week old, and 5*s.* salesman's commission, leaves a profit of £3 5*s.*, or 5*s.* 6*d.* per week for the cow's milk. Now, deducting 2*s.* 6*d.* per week for the keep of the cow, the bare profit left is only 3*s.* per week. But it must be remembered that a good cow will fatten off two calves, while she is in milk; some I have had, two and a half, but this is rarely accounted on. Still, taking one cow with another kept for the purpose of suckling, her annual returns will be nearly what it is commonly estimated at, namely, £12. To ensure this or any other sum as clear profit, depends entirely on the attention bestowed on the cows and calves.—Some cows are odd-tempered, letting down their milk only to their own calves, and withholding it from those they are made to foster. This, if not corrected, will injure both cow and calf; the one will be starved, and the other will soon become dry. One of the greatest rarities about a calf-fattening farmer's house is a drop of cream, or even milk for the owner's tea! The cowman is constantly enjoined to forward the calves as fast as possible; and though it be his duty to strip every teat after the calves are satisfied, still but very little comes to the tea-table, if the number of calves are duly proportioned to the stock of milk.—*Quarterly Journal of Agriculture.*

It is not often that insects have been weighed; but Reaumur's curiosity was excited to know the weight of bees, and he found that 336 weighed an ounce, and 5,376 a pound. According to John Hunter, an ale-house pint contains 2,160 workers.—*Kirby and Spence.*

Cultivation and Profits of Cucumbers.

BY TUNIS G. BERGEN.

Agreeable to promise, I will now endeavor to describe the manner in which cucumbers are cultivated on Long Island, for the supply of the New York markets, and will also give the produce and amount of sales from my crop of the preceding four years. Before proceeding with the matter, I would state, that the description is intended for field culture, and that our great object is, to have good fruit, and as early as it is possible to produce it, for two or three days makes a great difference in its value in the markets.

Cucumbers will grow on any good soil, but to have them early, we require a rich sandy one, of a dark color; yellow and light colored ones being later. The field, if possible, requires to be protected from the south and north-west winds, and be situated near the bay or river, where there is always less danger from late frosts. The south winds with us, in May and June, retard vegetation more than any other, in consequence of their being chilly and cool, which qualities they receive from the ocean.

Ground intended for cucumbers, we prefer ploughing in August or the beginning of September of the preceding year, and sowing with rye; the pasture which this produces pays for the labor, and among its advantages are, the prevention of weeds going to seed and troubling us in the spring; the soil not blowing about in winter, especially on the knolls; neither is it so liable to blow when ploughed in the spring, in consequence of the roots of the plants, and the sustenance afforded to the crop by the decay of the rye. Previous to ploughing for the crop, there should be spread about seven two-horse loads of street or horse manure to the acre; but if the soil is poor, more will be necessary, and the ploughing should take place immediately after the spreading. The ground is then harrowed over two or three times, until it is mellow, furrowed shallow, with a plough, into hills four and a half feet asunder, manured with half a shovel full in a hill, which is flattened down with a hoe, and covered about an inch thick with fine soil. Short hog manure, carted out of the pen the preceding fall, and cut over early in the spring once or twice, and made fine, is preferred for the hills; but this not being generally sufficiently abundant, we procure the manure of cows which have been fed on distillers' slops, mixed with that of horses, so as to make it sufficiently firm to handle with a fork, from New York in the fall, which we mix with the hog manure. The manure should be cool, for fermentation in the hills is injurious to the plants.

The sooner the seed is planted after ploughing, the better: the time of planting depends upon the forwardness of the season, and it is generally commenced when single apricot blossoms are open, but some seasons earlier. About a week is occupied in putting in the first seed, and nearly the same period in planting over the first and second times. The casualties to which the seed and plants are subject, induces us to continue putting in seed almost every day for this space of time, so as to make certain work. It sometimes happens, when the weather has been unfavorable, that every hill in some fields is planted over the third, and even single hills the fourth time. I prefer spreading the first seed in the south half of the hills, the first planting over in the north-west, and the second in the north-east quarters: if it becomes necessary to plant over the third time, I put the seed in the south half, where the first seed by that time is rotten. If this plan is properly followed, the different plantings will not interfere with each other. We generally put in from thirty to forty seeds each time, and cover them with fine soil from three-quarters to an inch deep. Sprouting the seed previous to planting does not succeed well early in the season, but does sometimes when the weather is favorable in the latter part. Cucumber seed is the tenderest of the vine kind, for if, after planting at the usual depth, wet weather should follow, it is almost certain to rot; if dry, it dries out; if, when favorable to their vegetating, and the plants have advanced so as to be breaking ground, a storm should occur, they generally perish; a north-easter of three or four days' continuance destroys the plants when young, and in some instances when more than a week old; if up too early, a late frost is apt to sweep them clean. Seed to vegetate requires to be near the surface of the wet soil, not buried deep into it; our ignorance of the weather which will follow after planting, causes most of our errors; when planted in a heavy soil, it is less liable to rot and dry out than in a sandy one, but the fruit is later. If it happens that there are more plants in a hill than we require, we find it an easy matter to eradicate them with the hoe and fingers, but it is not so easy to place them in the hills when deficient.

When the first rough leaves of the plants are about the size of a twenty-five cent piece, a cultivator is run through the rows both ways, and they receive the first hoeing; the plants are also thinned out, so as not to crowd each other. In hoeing, the soil between the plants should not be disturbed; large weeds, (if any,) be pulled out; fine soil drawn around the plants up to the seed leaves, so as to cover small weeds, and the hill made flat and

not concave. We are careful not to hoe while the plants are very young, for if a storm should occur shortly after the operation has been performed, the hills soak in too much water, which is injurious. Ten or twelve days after the first hoeing, the plants (if good,) are thinned to six or eight in a hill, leaving the largest ones, and if possible three or four inches apart. About eighteen days after the first hoeing, or about the time when single blossoms open, we run a one-horse plough twice through a row each way, (if the ground is hard, three times,) throwing the furrow from the hills, and then commence the second hoeing, which is performed in the same manner as the first, care being taken not to earth up higher than the seed leaves, and to scrape out the crust between the plants, if the ground is hard or covered with weeds: they are, also, if the plants are fair, thinned down to five in a hill.

When the vines extend so that single ones meet each other between the hills, to prevent injury, they are carefully laid aside by hand, or with a short stick, and the cultivator for the last time is run once through a row each way. They then receive the third and last hoeing, the ground being loosened and drawn up around the hills with the hoe, and broken between the plants with the fingers. It is customary to leave five plants in a hill, standing from four to five inches apart, but some reduce them to four: have tried no experiment to test which is the best.

Cucumber vines will yield fruit about eight weeks, and the fields are picked over at least every second and sometimes every day. In picking, a light stick with a cross-piece framed to it so as to resemble the letter T, is made use of to push the leaves aside and more readily discover the fruit.

The insects which trouble and destroy the plants, are the black worm and striped bugs: the first is apt to be numerous in ground which was occupied the preceding year with red clover; they cut off the plants at or above the surface in the night, and are generally hunted out early in the morning, when their burrowing is fresh, and they lay near the surface, until the ground is cleared of them: the striped bug or yellow fly eats the plants in the day time, and is sometimes very destructive on land where a crust is formed on the surface, which being raised up by the young plants, affords them a harbor. The best remedy is, with the fingers to catch and destroy them in the morning, when the dew is on them and they are chilled, which prevents their flying and escaping as freely as when the sun has warmed them. Sandy land, having no crust to shelter these pests, is generally exempt from their depredations.

We are acquainted with the system of rotation of crops, and it has been practised among our farmers for years, but cucumbers as well as some other vegetables, do not seem to require it. I have a piece of about half an acre, on which I have cultivated them for the last ten successive years, ploughing in the usual quantity of street manure every second year, and they have flourished as well as on the adjoining ground, which has been similarly manured, and on which the crops have been changed.

The following is the quantity planted, produce, and amount of sales, for the last four years, viz:

Year.	Hills planted.	Cucumbers sold.	Am't rec'd.
1835,	6,000,	104,965,	$823 84
1836,	6,000,	99,670,	820 96
1837,	7,370,	130,735,	532 00
1838,	7,110;	118,600,	734 87½

During each of these years, large quantities of cullings, and, when unsaleable, good ones, were fed to the hogs and cattle, of which no account was kept.—*Cultivator.*

Narrows, L. I., October 26, 1838.

For the Farmers' Cabinet.

Birds and Insects.

All species of birds that feed on grubs, slugs, insects and worms, should be fostered and protected as the best friends of the farmer and the gardener; and children should be early instructed in a knowledge of the benefits derived from them in the protection of grain, fruit and vegetables. They should be taught to consider the persecution or destruction of them as injurious and disreputable, and only practised by the ignorant, the cruel, and the vicious portion of our species.

The instructive and interesting work of Kirby and Spence on Entomology, is full of valuable information on this subject, a small portion of which I extract for the use of your young readers.

"The wry-neck and the woodpecker, the nuthatch and tree-creeper, (or sap sucker as it is sometimes called,) live entirely upon insects which they pick out of decayed trees, and out of the bark of living ones. The former also frequents grass-plats and ant hills, into which it darts its long flexible tongue, and so draws out its prey. The woodpecker also draws insects out of their holes by means of the same organ, which for this purpose is bony at the end and barbed, and furnished with a curious apparatus of muscles to enable them to throw it forward with great force. The same species spit the insects on their tongue, and thus bring them into their mouth.

Many of the long-billed birds eat the larvæ of insects as well as worms; and they form also no inconsiderable part of the food of our domestic poultry, especially turkeys, which

may be daily seen busily engaged in hunting for them, and, as well as ducks, will greedily devour the largest insects.

Mr. Sheppard was much amused one day in July last year, with observing a cow which had taken refuge in a pond, probably from the gad-fly, and was standing nearly up to its belly in water. A fleet of ducks surrounded it, which kept continually jumping at the flies that alighted upon her. The cow, as if sensible of the service they were rendering her, stood perfectly still, though assailed and pecked on all sides by them.

The partridge takes her young brood to an ant-hill, where they feast. The common sparrow, though proscribed as a most mischievous bird, destroys a vast number of insects. Bradley has calculated that a single pair, having young to maintain, will destroy 3360 caterpillars in a week. They also prey upon butterflies and other winged insects. The fly catchers and the warblers, which include our sweetest songsters, are almost entirely supported by insects; so that were it not for these despised creatures we should be deprived of some of our greatest pleasures, and half the interest and delight of our vernal walks would be done away.

Insects are the sole food of swallows, which are always on the wing hawking for them, and their flight is regulated by that of their prey. When the atmosphere is dry and clear, and their small game flies high, they seek the skies; when moist, and the insects are low or upon the ground, they descend and just skim the surface of the earth and waters; and thus by their flights are regarded as prognosticating fair or wet weather.

I was last summer much interested and amused by observing the tender care and assiduity with which an old swallow supplied her young with this kind of food. My attention was called to a young brood, that having left their nest before they were strong enough to take wing, were stationed on the lead which covers a bow window of my house. The mother was perpetually going and returning, putting an insect into the mouth first of one and then of the others in succession, all fluttering and opening their mouths to receive her gift. She was scarcely ever more than a minute away, and continued her excursions as long as we had time to observe her. When the little ones were satisfied, they put their head under their wing and went to sleep. The number of insects caught by this tribe is inconceivable."

The swallow pays a rent for the shelter furnished by the barn.

B.

The value of a man consists in what he does well.

From the Practical Farmer.

Cleaning Neat Cattle.

The following we translated, and we would invite the attention of farmers to the subject. Our German correspondent is the right kind of a man. He gives his notions well confirmed by experience.—*Ed.*

Xenia, Ohio, June 14th, 1838.

Mr. Editor,—Allow me, through the "Farmer," to say a word to my fellow farmers on, what seems to me, an important subject. In this country, you will seldom find a curry-comb and hand brush in the cow-stable; but I consider them indispensable in the cow-stable, as in the horse-stable. Why farmers do not curry and brush their cows, I know not, unless it be that they think cleanliness is not so necessary to the cow as to the horse.

But if we will, for a moment, consider the evils arising from this neglect, the importance of keeping cows clean, must strike every reflecting mind. It is well known that no animal, neither horse nor cow, can be healthy, unless *the insensible perspiration goes on regularly*, and this can never be going on if cows are kept in a dirty stable, and no pains taken to rub off carefully the dirt or matter which obstructs the vessels or pores of the skin.

Wherever cows are regularly curried and rubbed they are invariably stronger and in a healthier condition; not liable to *cutaneous* and other diseases; and from experience I know they yield more milk, and that too of a better quality—a cleaner milk, richer cream, and sweeter butter, necessarily follow.

I make it a practice to curry my cows once a day very carefully—I never suffer any dung to stick to their coats—it looks bad, and injures the cows. This useful animal does not deserve such *dirty treatment.* Give them litter sufficient, and remove the dung regularly, and this part is accomplished.

Many of our farmers seem to think that in order to have healthy and good cows, you need only feed them with a sufficiency of food; however, I am fully convinced from experience, that cows may be well supplied with food, still they will not be as profitable as they would be, if kept perfectly clean, and free from all kind of dirt and matter obstructing perspiration, as above stated; besides this, if cows are kept perfectly clean, they will thrive upon a less quantity of food.

Cows are often subject to have swollen teats and udders, as well as other excrescences.—These may be prevented if the parts be occasionally washed with warm water. The udder and teats should be carefully washed immediately before the cow is milked. It has been well said by Loudon: "Go to the cow stall—take with you cold water and a sponge,

and wash each cow's udder clean before milking; dowse the udder with cold water, winter and summer, as it braces, and repels heat."

DAVID HEYMACKER.

On the best means of permanently improving the class of Clay Soils.

Clay soils are distinguished by their adhesiveness. They stick to the feet when damp, they imbibe moisture slowly, but do not transmit it freely for the use of plants, and when strong clay soils are brought quickly from a wet to a dry state, they approach to the state of bricks previous to their being burned. Clay soils are tilled with difficulty when too dry, and when too wet this operation has the same effect as the tempering of clay has, in the art of brick making.

The tillage of such land in a proper state is therefore of the greatest importance, and this is best performed when it is neither too wet nor too dry.

Poor thin clays upon a retentive subsoil are the most unprofitable; the expense of their cultivation, under the present system is great, being frequently equal to the value of the produce, and sometimes far above it. Their natural produce is coarse grass of very light value, fit only for young beasts.

Clay soils are best calculated for the production of plants that have fibrous roots, particularly wheat, beans, oats, vetches, clover, cabbage, grass, &c.

While the light sandy soils have been greatly improved by the adoption of a new system of culture, the poor clays remain in the same state they were in a century ago, without any increase to their productiveness; indeed they are rather in a worse state than formerly. It is therefore supposed by some agriculturists, that as there have been no improvements in the clay soils, while there has been so great an increase in the productiveness of sandy soils that the clays are not susceptible of improvement with the least chance of a proper return.

There is no doubt but a better system could be adopted for the cultivation of such strong clay soils than that which is pursued in the common fields, and on the clays of Bedford, Huntington, Cambridge, and other counties on the malm, gault, oak-tree, clunch, Oxford and blue lias clays.

The course of cropping adopted in the common fields and on thin clay, is summer fallow, if dunged, wheat, and then beans; or without dung, barley, then oats, then fallow again, and this is the same as it was 100 years ago.

The chief cause of thus neglecting the clay soils is the difficulty and expense of cultivating them and of converting them into pasture, after having been long kept under this system of arable cultivation. It is difficult to convert such land into good pasture, but it has been overcome and the best and most profitable results have followed.

There is a much greater difficulty in getting a poor, cold, clay farm lot, than one consisting of a poor sandy soil. The capital and ability required for the former being not only much greater, and of a higher order, but the risk is also much more in cultivating the clay, than the sand, as the mode of improving the land and securing good crops on sandy soils by claying is easy and certain, and the turnep and sheep husbandry cannot be adopted on clays.

Besides, the system of cultivating light sand or loamy soils has been so long established, and the Norfolk or four-field system has now become so much the beaten track, that it would be difficult for the farmers who have been brought up to it, to leave off, although a better one were shown them.

The turnep, and sheep system, however, cannot be adopted on clay soils, till they are completely drained and subsoil ploughed, and till sand or light and porous matter be added to alter their texture.

Some new impulse must be given to agricultural speculations before the cold wet clay soil will ever attain that degree of improvement which they are capable of, and which has been effected in the sandy and peaty soils.

There is no doubt, however, but thin clay soils could be easily improved, and, perhaps, in a much greater degree than the sandy soils have been during the last forty years; and the surface may yet be seen clothed with a rich herbage which shall vie with that of other soils in producing the best cheese, beef, and mutton.

Clay soils will produce pasture just in proportion to the quantity of decaying active vegetable matter in their composition. If this be abundant, the crop will be rich and luxuriant; and the decaying fibrous roots will form a dry, porous soil, giving a sufficient depth for the rain to sink through the subsoil, where it will run off by the furrow drains. If there be little vegetable matter in the soil, the moisture will make the earthy matter in it collapse and adhere together; and it will form a cold, wet, sterile clay, producing little else but carnation grass of little value.

Pasture on clay soils should never be converted into arable culture, unless the application of skill and capital, will not only repay the additional expense of the culture, but also tend to increase the permanent productiveness of the soil. Without a proper application of skill, capital, and industry on such land, the converting it into arable culture will only tend to diminish the produce, if the free produce

under the artificial culture falls short of that which nature itself afforded.

Much may be learned from the practice of market gardeners, in the neighborhood of London and elsewhere. They have two methods of trenching their land. When the soil and subsoil are good to a great depth, they turn the surface under and fetch up a fresh spit from below to constitute the surface for so many years; but when the subsoil is poor, or strong clay, they bastard trench it, as they call it; that is, they throw the surface spit forward, always keeping it uppermost, and dig the subsoil by turning it over in the trench without moving it from its place.

Their object in thus trenching their clay soils is to get depth for the rain-water to descend, and to give a greater depth of moisture to the roots of plants in dry weather, and for the superabundant moisture in wet weather to descend below the roots of plants, and run off to the drain.

If we perfectly drain thin clay soil by furrow draining, and deepen the subsoil by trenching with the spade or the subsoil plough, making it pervious to the moisture which falls on it, that it may immediately sink to a depth below the roots of the plants, the cultivated surface will be dry; and if we reduce the tenacity of the soil by applying to it those light or sandy substances, which, when well incorporated with it, will make and keep the soil permanently porous and friable, then the land which before produced only a poor crop of carnation grass, or if arable, of oats, will now produce an abundant crop of wheat, beans, oats, clover, and even turneps; and if properly laid down, and full of manure, will form a rich pasturage for any kind of stock.

When clay soils have dry pervious subsoils, they become darker in color from the repeated application of manures, and under a proper system of cultivation they loose their adhesiveness, and become a loamy soil, producing the most fruitful crops of wheat, beans, clover, vetches, cabbage, and naturally produce the best and richest herbage for dairy cows. The milk from cows fed on such pasture produces more cheese and butter than the milk from cows fed on a sandy soil, and of a better quality.

Anything which will produce permanent friability in clay soils, such as sand, lime, burnt clay, loose light vegetable matter, or long unfermented manure, will alter its texture and improve its quality.

When tenacious soils are completely subsoil drained, and a system of deep or subsoil ploughing is adopted, every time when the land is in summer fallow, if the soil be deepened and the subsoil made more porous; and if never ploughed when too wet, and a full portion of vegetable manure be given to the soil, and well mixed with it, a mechanical effect will be produced, which will change the nature and texture of the soils, and give to it that friability which is so essential in all productive soils. The rain that falls on it will now percolate through it to the depth of the new formed subsoil, and thence to the furrow drains.

The soil now receives the circulation of the air, which is carried on by the rains filling up the interstices which the air previously occupied, and the complete drainage draws off all the superabundant water as it falls. By this operation the earth again receives a fresh supply of air from the atmosphere, which promotes a chemical as well as mechanical action in the soil, and hastens the decomposition of the air and water, as well as the vegetable and animal manure it contains, and thus a liberal supply of the nourishment necessary for the growth of plants is obtained.

Soil that is principally composed of calcareous matter, in minute divisions, becomes a most tenacious stubborn soil; and, under certain circumstances, as sterile as the most worthless clay. Calcareous matter, therefore, although reckoned a valuable constituent in a soil, becomes an evil when it composes the greater part of it.

Calcareous clay, when thoroughly dried, falls to pieces like burnt lime, whenever it is again wetted. Every poor clay soil may be much improved by paring and burning the surface, after it has been completely drained.

This is the first step that ought to be taken towards meliorating such a soil, and the more clayey the soil is, the deeper ought the soil to be burnt. When the burnt surface is mixed with the soil to the depth of the furrow, it acts as a coarse sand, and makes it more friable and porous, by converting the matter, which was before damp and adhesive, into a dry, friable, warm soil, permanently improved and capable of producing luxuriant crops of every kind.

If we can get depth and friability to the subsoil of strong adhesive clay, we thereby prevent stagnant water from injuring the roots, and give to the plants the liberty of sending their roots to a greater depth in search of nourishment.

In all rich soils there is vegetable matter in every state of decay, and the greater this portion of decaying vegetable matter is in strong clay soils, the greater is its productive powers. Besides this, decomposing vegetable matter will tend to keep strong clay land loose, friable, and porous.—*London Farmers' Magazine for October.*

Ingratitude is of all crimes what in ourselves we account the most venal—in others, the most unpardonable.

For the Farmers' Cabinet.

The Bank of Earth vs. Bank Stock.

Friend Libby,—I have seen from time to time, in your paper, as well as other agricultural publications of the country, many assertions that farming was profitable, more so than investing money in good, steady 6 per cent. stocks. This is doubted by many, and by myself among the rest, and the only mode I know of to arrive at the truth of the matter, is by soliciting facts. Anxious for light on this matter, I take the liberty of asking of some of your subscribers, practical and intelligent farmers, their experience on the subject, and beg of them to give it in detail something after the following manner.

1st, The number of acres in each, meadow land, grain land, and wood land, and the value per acre.

2nd, The value of their house.

3rd, Of their barn.

4th, Of out buildings.

5th, Of their stock; and

6th, Of their farming utensils, each separate; and then, on the other hand, a detailed estimate of their products and value, for an average of say five years. The question then, could be fairly settled, and would, I am sure, not only satisfy many of your subscribers, but lead to the cultivation of more of our state, if the inducements proved sufficient.

An Old Subscriber.

Philada. 12th mo. 17th, 1838.

For the Farmers' Cabinet.

Rain Water Cisterns.

The importance of having a supply of water in the barn yard for cattle has already been adverted to in the Cabinet, and it is a subject which can't be too strongly impressed on the minds of farmers. The quantity of manure lost by driving stock twice a day to water, is much greater than is generally supposed, for the droppings are most copiously deposited immediately after drinking. In many situations water is easily procured from wells of moderate depth and at little cost, compared with the benefit derived; and in all situations cisterns may be built, and the water from roofs conveyed into them, at a very small expense, when contrasted with the advantage resulting from them. In this climate, the average fall of rain annually is about three feet, which furnishes about twenty gallons of water for each square foot of surface during the year, and from these data it is easy to estimate the quantity which may be collected from a building of any given dimensions. A cistern will cost from twenty-five to fifty dollars, built after the best manner, and the best is always the cheapest in the end; the interest on this is from 1.50 to 3 dollars a year, being a sum far below the expense and trouble of taking the cattle to water, without reference to the great loss of manure.

The following table shows about the number of gallons of water contained in cisterns of the following diameters in the clear for each foot of their depth, viz:

Diameter.	Gallons.
5 feet	120
6 feet	170
7 feet	230
8 feet	308
9 feet	390
10 feet	480

By multiplying the number of gallons here stated by the depth of the cistern in feet, the product will be the number of gallons it will contain sufficiently near for any practical purpose.

The circular form is preferable to any other for a cistern, as it possesses greater strength with less materials; the principle of the arch keeping the parts combined together. Where they are constructed with brick, the width of a brick is sufficient for the thickness of the wall; where stone is used, the wall must necessarily be thicker, but the main matter is to have the mortar well made of the best clean sand, and not too much lime, and great care must be taken that all the interstices are well filled in, so as not to admit the water to escape. A coat of plastering well put on, of common mortar made in the best manner, with no more lime than is absolutely necessary to coat the sand and cause it to work evenly, has been found to be a complete protection against leakage, but the whole should be executed in a masterly manner by a careful, conscientious workman; otherwise, you will have a broken cistern, holding no water. Those who are disposed to incur a little more expense, may procure Roman cement, or water lime, such as is much used in the construction of locks for artificial navigation for plastering, and when used, it should not be put on thick, but as evenly as possible; and in the use of this article a second coat should never be applied over the first; all that is done should be done at once; it will not adhere well, and would soon peel off, and endanger the stability of the coat over which it is applied.

Cisterns have been in use from the earliest periods of which we have any historical account, and in modern times many have been constructed, which have been long in use, and which their owners would not dispense with for ten times their original cost; therefore let those who are destitute of other means of furnishing water to their stock in their barn yards, proceed at as early a period of time as practicable, to construct a cis-

tern in the best manner, and in two years the saving of time, trouble and manure, will repay the cost with interest. Therefore

"Build for yourselves cisterns holding water."

O.

On Weeding Land.

The subject of weeding or cleaning land is of much greater extent and importance than is commonly imagined; for it is not only necessary to clear grain fields from weeds, but grass lands demand an almost equal attention. Nay, these enemies to useful produce, should be destroyed wherever they are to be met with; for if left unmolested, they will spread their seeds over fields, with a greater rapidity than can well be imagined.

It is the more necessary to attend to this subject, as Nature seems to have made uncommon efforts to preserve these species of plants. Many of them propagate both by their seeds and their roots;—in some cases, the roots are so deep in the ground, that it is hardly possible to reach them; while in others, every joint in the root forms a new plant. The extirpation of weeds, under these circumstances, must be attended with difficulty, and it is evident, that the measures to be used for that purpose, must be of a general, and not of a partial nature.

Weeds are commonly divided into three classes—*Annuals*, which continue only one year, the plant dying after its seeds are perfected; *Biennials*, which continue two years, and die after maturing their seeds the second year; and *Perennials*, which continue in existence several years. Many of these are propagated both from the root and the seed.

These different sorts of weeds are found in corn fields;—in grass lands;—in hedges;—in waste and uncultivated lands;—and in woods and plantations: nor are gardens, notwithstanding the care bestowed on their culture, exempted from them.

ARABLE LANDS.

The clearing of arable lands from weeds, may in general be accomplished by, 1. Complete and well managed fallows, whenever that operation is required. 2. By taking care that the manure used is free from the seeds of weeds, or any roots that can vegetate; for which purpose, fermenting dunghills is advisable. 3. By a careful choice of clean seed corn. 4. By short tillages, or not taking too many crops in rotation, previous to the land being laid down to grass. 5. By attentive hand weeding, and a spirited use of the hoe. 6. By drilling crops, in soils applicable to that culture. 7. By the strictest attention to the choice of grass seeds, that no seeds of weeds be intermingled with them. 8. By weeding the land while in grass, so as not to suffer the seeds of any injurious plants to spread themselves; and, 9. Upon breaking up the land, by pursuing such a system of cropping, as will not increase or encourage weeds, in particular by adopting rotations in which green crops shall predominate. On the subject of weeds in arable land, it is highly material to observe, that their seeds are often mixed with the grain, and when ground with it, render the bread unwholesome. Such weeds are universal enemies, from whose mischievous attacks no individual is exempted, and whose destruction, it is every one's interest, as well as duty, to promote.

GRASS LANDS.

It is difficult, in some cases, to discriminate, in meadows and pastures, the useful plants, from those that are injurious; but amidst the great variety which nature produces in such lands, there are several, which are not calculated to feed domesticated animals, and ought therefore to be removed, for the introduction of others better adapted for that purpose. No person of common understanding, would ever think of allowing the live stock of his neighbors to feed upon his pastures, as the diminution of food to his own stock, by that circumstance, would be sufficiently obvious. A little consideration, however, may convince every individual, that a multitude of weeds interspersed among his grasses, produce effects not less mischievous, than those that would ensue from such depredations of live stock. Yet we are informed on respectable authority, that in some of the best conditioned pastures, thistles and other weeds occupy at least half the land, to the exclusion of an equal number of useful plants.

Above twenty different kinds of weeds infest grass lands, besides about thirty more, of less importance, whose characters are doubtful, or whose uses are not ascertained. Some of the most worthless, as the rush, (*juncus*,) and the sedge tribe, (*carexes*,) may be got the better of by draining; others, like the mosses, (*musci*,) by cultivation and manure; but there are a few which require individual attention, before they can be eradicated; in particular the dock, the thistle, and the rag-weed.

MEANS OF PREVENTING THE INCREASE OF WEEDS.

This is a point which requires a number of precautions on the part of the farmer. 1. There is a great risk of carrying a nuisance to his fields, if he use unfermented dung, and where that system is adopted, drilling and careful hoeing are necessary. 2. Great care

should be taken, when corn is dressed, that none of the offal, which contains the seeds of weeds, should be thrown upon the dung-hill; and if any weeds grow upon the dung-hill, or compost heap, they should be cut before seeding. 3. Seed should be thoroughly cleaned of all other substances, before it is deposited in the ground; and, 4. Great care should be taken, to purchase the best seeds of artificial grasses, particularly when rye grass is used. Many fields, after being completely fallowed, and sown with grass seeds with the fallow crop, have been found, when re-ploughed, to be stored with weeds of various sorts, most probably from some unfortunate mixture in the grass seeds. The seeds of docks are often sown with clover, and those of other pernicious plants with other grasses. The seeds of weeds are sometimes brought from the uplands in floods, floating on the water, and are left in multitudes by the eddies in particular places.

ADVANTAGES TO BE DERIVED FROM THE DESTRUCTION OF WEEDS.

Plants that grow naturally, among a crop that has been sown, may be regarded as *weeds*, or, in other words, as enemies to the crop that is cultivated. The destruction of weeds, therefore, must be considered as one of the most important branches of the agricultural art; for if it be neglected, or even but slovenly performed, one third, or one-half of a fair crop, may only be obtained, even from the very best soils. Besides, it merits consideration, that if weeds are suffered to exist, the full advantages of manuring land, and many other improvements, can only be but partially reaped. Nor is this all; the mixture of weeds in the soil, prevents the crop from receiving the beneficial influence of the air;—augments the risks at harvest, (for a crop that is clean, may be ready for the stack yard in much less time than is required to harvest it, when encumbered with weeds;)—and the seeds of these intruders, deteriorate the quality of the grain. Notwithstanding all the injuries thence sustained, how many are there, who hardly ever attempt to remove weeds in an effectual manner! This negligence is the more to be blamed, because, were farmers at the trouble of collecting all sorts of weeds, before they have formed their seeds, and of mixing them with rich earth, they would soon be reduced into a soft pulpy mass, and in this way a pernicious nuisance might be converted into a valuable manure.

Health is the poor man's wealth, and the rich man's bliss.

Follow your business closely, and it will lead you to honor and wealth.

For the Farmers' Cabinet.

Forecast.

"Consider the end."

There is no profession or calling wherein not only the energies of the body, but those of the mind are brought into more profitable requisition than that of agriculture. Those who entertain the opinion that farming can be carried on with reputation and profit, without a good deal of sound reflection and thought, appear to labor under a grand error of judgment in the matter, for of all kinds of business in which man is engaged, none requires more sound discretion and *forecast.*

During the winter, in addition to the current duties of the season, of threshing out, and preparing his grain for a market, and taking a *fatherly* care of the domestic animals constituting his stock, he must lay his plans, and carefully and wisely digest them, so as to enable him to commence and carry on his spring and summer operations effectively; and all this requires a good deal of sound discretion and *forecast.*

On the opening of spring, nature never waits to accommodate an idle, careless farmer; he must therefore be up and doing, for there are scores of matters to do, and no such thing as stretching out the time for accomplishing them. There is the oats that can't be too soon in the ground; the Indian corn (the most important and valuable crop which we produce) won't permit any delay or neglect in the preparation of the ground, or of its subsequent treatment, without affecting his interests very seriously; the garden can't be started too early; and the grass fields and fences must be looked after and attended to, at as early a period as practicable; all these with a host of other minor duties of the season, keep the mind and body in perpetual motion, and show the importance of sound discretion and *forecast.*

Summer, with its numerous heavy cares and duties, is down upon us almost before we are aware of it, and generally before most farmers are ready for it. Here is hay making, corn dressing, and harvesting with numerous other important matters, all requiring prompt and vigilant attention, and all impatient of delay. These are heavy duties, and the penalty for their neglect is so serious as to call forth all our energies, and to bring into requisition a double share of sound discretion and *forecast.*

Now comes the autumn, when there is every thing to do, and you don't know how short the time may be you will have to do it in.—The winter grain must be put in nicely and completely, or there is a heavy penalty in store for the delinquent: the potatoes and other root crops, the buckwheat and the Indian corn must all be gathered in and housed and taken

proper care of. In fact, the labors of the fall months resemble the preparations for a seige; they have to be extended not only to the winter, but much has to be done in anticipation of the succeeding spring; the oats and corn grounds should be ploughed, so as to give them the benefits of the meliorating influence of the winter frosts, and the garden grounds should be thrown up and trenched for the same reason. Now where is the person who will venture to say that the man who conducts all these various processes effectively, has not a necessity for a double dose of sound discretion and *forecast.* AGRICOLA.

For the Farmers' Cabinet.

Feeding Stock.

"A hungry belly and a filthy hide profit not."

A farmer's interest is greatly promoted by carrying his stock through the winter and spring months in a good and thriving condition. Those that are pinched for want of proper sustenance during the feeding season seldom fully recover from it during the summer; and the profit from milch cows is much lessened by it. On the 1st of February a good farmer should always have at least one half of his winter stock of provender on hand. February and March, are the months when stock requires the most care and attention; animals appear to suffer more from wet and the frequent transitions of weather at this season of the year than at any other; and consequently should be well protected and supplied liberally with plenty of nutritious and wholesome food; a portion of which should, if possible, be of a succulent character, as sugar beet, steamed or boiled potatoes, or a small quantity of Indian corn which has been reduced to a jelly by boiling; a portion of salt should also be given to each animal at least twice a week.

Cut hay put into hogsheads or troughs, and a couple of buckets of boiling water poured upon it, immediately covering it up close, and permitting it to remain for six or eight hours before feeding, will be found to be a very grateful and nutritious food for milch cows, who will amply repay their owner, principal and interest, for his additional labor and care in furnishing them with such a delicious repast two or three times a week. It is taken for granted that those who take due care to see that their cattle are duly and properly sheltered and fed, also extend the necessary care to keep them *clean*, for without this, the work is only half done, as neither man or beast can thrive when covered with filth.

O.

Gladness of heart, is the life of a man; but envy, wrath and sorrow, shorten his days.

Analogy between Medical and Agricultural Education.

The physician and surgeon, to qualify them for their profession of preserving life, are required to study the anatomy of the human frame, the functions of every part of the system, and the nature and quality of whatever is requisite to administer to its wants, or to remove the ills which flesh is heir to. Without this knowledge he can but *guess* at the cause or seat of disease, and of course his prescriptions must be questionable, and often a knowledge of these matters cannot be acquired by bare practice. It must be obtained from the teaching of ages—in schools of medical science—in the dissecting room. Hence the laws of every civilized people require in the pupil this preliminary study before he is permitted to practice the art professionally. And no intelligent man, who justly appreciates the necessity of the science to perfect the art, likes to trust his health and his life in the hands of a pretender, who knows nothing of the great principles of the business which he professes to practice.

So with husbandry. It embraces principles of science, upon which good modes of practice must necessarily be based; and without a knowledge of these principles, the labors of the farmer, like the prescriptions of the quack, must be either *guess work* or confined to the routine in which he has been instructed. His soil and his animals are liable to sterility which he is ill qualified to cure. Unless he knows something of the compositions of the one, the anatomy of the other, as branches of natural science, he is not likely to discover the true cause of an evil, nor to apply to it the right remedy. We will give a single illustration of farm crops. It is now universally admitted, that the alternation of crops is highly conducive to good husbandry. But why is it so? Science, which expounds the laws of the Creator, in regard to inanimate matter, not only furnishes a satisfactory answer to the question, but suggest the classes of farm crops, and the order of succession, that ought to alternate and follow each other. Again,—gypsum, lime, marl and ashes, are beneficially applied to some soils, to some crops, and in some seasons, while they are not beneficial upon other soils, to other crops, and in other seasons. Science can only explain these seeming contradictions. In schools of scientific and practical agriculture, in which a series of experiments should be continually going on, these problems would ere long be solved; rules of practice would be laid down; the results, and the natural causes of these results, would be explained, and the community, and every member thereof, who had a latent spark of improvement, or the ambition to improve his condition, would

seek for practice, and profit, from the discovery. In this, agriculture differs from most other professions, the benefits of improvements may be monopolized by an individual, or a small number; improvements in husbandry are accessible to all, who are not too conceited to learn, or too indolent to practice, from the examples of improvement which are every day making around them.

The results of the analogy which we have drawn, between medical and agricultural knowledge is this,—that science is equally beneficial to both; that while the one is destined to preserve and prolong life, the other is charged with nourishing it, and of multiplying its comforts and enjoyments; and that both are consequently, entitled to the protecting care of an enlightened community.—*Cultivator.*

Salt,—Flax, &c.

Highlands, Santee, Aug. 17, 1838.

Mr. Editor,—I am one of those who are never better pleased than when they see the resources of a country developed, and employment provided for all who are able to work. Every one is a public benefactor who introduces a valuable plant, or improves the value of those already under cultivation.—Too much attention cannot be paid to manures, either in obtaining new ones, or the application of those well known. With your permission I propose to compile some facts by which your readers may profit if they choose, while doing so will afford me occupation for an hour or so. It seems to me too little pains are taken to ascertain the properties and value of salt as a manure. That it is of great value to man, we may rationally infer from the great use the Creator of all has made of it, and the facility with which the greatest abundance can be obtained. Whatever is most valuable to man, and the animal creation, exists in the greatest abundance. There can be no doubt the article of flax can be added to the productions of the higher portions of the Southern States, and pay the producers a fair profit. Under this impression I will show how flax fields have been treated, and with salt as manure. It has been found advantage to salt the hay intended for the stock as it was put up, both to the cattle, and their dung as manure for any purpose. Flax seed sowed with salt, bushel for bushel, will yield a valuable return of seed and flax, both as regards quantity and quality; a greater quantity of seed and a longer flax. Some have sowed as much as five bushels to the acre, but others have thought so great a quantity injurious to the land. Be that as it may, it has been proved by actual experiment, that salt is friendly to flax. Fields of the same quantity of soil, side by side, have been sowed, one with flax seed and salt, and the other with flax seed alone. The product of the first was excellent, while that of the last was scarcely worth gathering. It has been found best in wet land, to delay salting till the flax attains a height of about four inches, and then with a bushel to the acre. It is laid down with great confidence, that two bushels of salt to one of flax seed, will never fail to produce a good crop of seed and flax, if the seasons do not prevent, and it is affirmed the seed will pay nearly or quite all of the expense of cleansing and dressing the flax. The application of salt at the rate of two bushels per acre, is most earnestly advised for oats, rye, and in fact for all sorts of grain, even Indian corn, and the increased yield of the fields so treated, are warranted to pay at least 500 per cent. and probably a thousand, upon the cost of the salt. I am pleased to learn that salt as manure is exciting attention among our low country farmers, and I do not doubt fair and persevering experiments, will ascertain its value, and bring it into general and constant use, where it can be had on favorable terms.

The Agriculturist's Note Book.

No. I.

Original and Selected.

GREASE FOR WHEELS AND MACHINERY.

M. D'Arcet, the celebrated French chemist, and master of the mint in France, recommends the following composition as *the best grease for wheels and machinery*, viz.: Eighty parts of grease and twenty parts of plumbago (black lead,) reduced to *very fine powder*, and *most intimately and completely mixed together.*—M. D'Arcet employs this composition with the greatest advantage at the mint, for locks, for his fowling piece, &c. In a journey from Paris to Marseilles, he greased with the above the wheels of his carriage, and again at Marseilles before his return, and the wheels, which appeared heavy and clumsy, rolled with the greatest ease, to the astonishment of the drivers. A very small quantity suffices. He gave some of it to a person going from Paris to Rome, who, on his return gave him back the most of it, so little was required.

THE DAIRY—CHEESE.

Mr. Peter Harvie, who obtained a premium from the Highland Agricultural Society, at the competition for cheese, speaking of his general dairy management, says, "our dairy consists of twenty-four cows, the milk of which is partly converted into rich and plain cheese, and partly into butter, as the state of the market for either commodity requires.—We have in some seasons sold 3500 lbs. of rich cheese, in which case less butter was made. With regard to dairy management, *cleanliness is the great requisite.* The milk-

house should be always clean, free of smell, and so constructed as to admit a current of air to circulate thoroughly through it, and at the same time to be regulated at pleasure. The utensils employed should always be kept clean and free from acidity. The cheese-house should be kept at the regular temperature of 70° Fahrenheit throughout the whole season of cheese-making, and the different processes of this manufacture should be attended to without delay. I conceive it quite impossible to produce cheese of fine quality and taste without the use of the thermometer.

TIME FOR CUTTING TIMBER.

The highly respectable Mr. Cooper, late of New Jersey, is said to have pronounced with great confidence that oak and hickory felled when their sap is vigorously flowing would not be attacked by worms, producing what is called powder post. The cause of this exemption from the depredation from worms, is probably the same as that of its extra-durability.

Sir Humphrey Davy tells us in his Elements of Agricultural Chemistry, that Mr. Knight examined the alburnum of different poles of oak in the same forest; of which some had been felled in winter, and others in summer; and he always found most soluble matter in the wood felled in the winter, and its specific gravity is likewise greater.

This being the case with the alburnum or sappy part of the wood, there can be no doubt of a somewhat similar difference in the heart part of wood.

The foregoing premises being admitted, we may conclude that timber felled in winter while replete with inspissated sap, after being thoroughly seasoned, will, of consequence be found easier to work, because more porous, or spongy, than that felled in summer, while the sap is more scanty and limpid, but the wood of the latter soon becomes more hard, strong and compact, and consequently more durable; and will never be bored by worms because it contains no nourishment for them. In timber felled in winter after being thoroughly seasoned, the essence or saccharine matter of the sap, still remains a nutritious and palatable food for various kinds of worms, both on land and under water; and these worms gain their living as they progress, from the wood they reduce to powder.

The vessels of the winter-felled timber, replete with sap when felled, are believed to continue open, and like a sponge remains susceptible of imbibing water when exposed, which inevitably produce fermentation and gradual decay.

On stripping timber of its bark in June, Sir H. Davy says: "the reason of the superiority of this timber is, that the concrete sap is expended in the spring in the sprouting of the leaf; and the circulation being destroyed, it is not formed anew; and the wood having its pores free from saccharine matter, is less liable to undergo fermentation from the action of the moisture and air." From a view of the testimony and argument adduced in connexion with the mass of testimony now before the public, we may safely conclude that the true cause of the extraordinary durability of timber felled in barking time is this, that when seasoned it becomes so compact as to become impervious to wet: and also, that it remains secure from the depredation of worms, because it contains no saccharine matter for them to subsist upon.

[The reader is referred to a very interesting and conclusive paper on this subject, to be found in the first number of the present volume of the Farmers' Cabinet, page 29.]

LINIMENT FOR THE GALLED BACKS OF HORSES.

KEATING, in his expedition to the source of St. Peter's River, says—For the information of other travelers, we may mention, that, after having tried many applications to the backs of horses, when galled, we have found none that succeeded so well as white lead moistened with milk. When milk was not to be procured, oil was substituted. Whenever the application was made in the early stage of the wound, we have found it to be very effectual, and it is likewise a convenient one, as two ounces of white-lead sufficed for the whole of our party for more than a month.

YOUNG CATTLE.

Young's Farmers' Calendar under January contains the following observations. "Last year's calves should now be fed with hay and roots, either turneps, carrots or potatoes; and they should be thoroughly well fed, and kept perfectly clean by means of litter; at this age it is a matter of great consequence to keep such young cattle as well as possible, for the contrary practice will inevitably stop their growth, which cannot be recovered by the best summer food. If hay is not to be had, good straw must be substituted; but then the roots should be given in greater plenty and with more attention. To steers and heifers two years old, the proper food is hay, if clean, or straw, with baits of turneps, cabbages, &c. It is not right to keep yearling calves, and two year old together, because in general the younger cattle are, the better they should be fed.—*Yankee Farmer.*

HORSE FOOD AND DRINK.

Some of the innkeepers on the western roads have lately begun to follow the practice recommended by the Bath Agricultural Society, of boiling the corn given to horses,

and giving them the water to drink. It is most satisfactorily ascertained, that three bushels of oats or barley so prepared, will keep a horse in better condition than double the quantity in a crude state.

RIDGE TRENCHING.

Garden grounds lying unemployed during the winter, may be greatly benefitted by ridge trenching. In this state the winter frost will meliorate and improve the soil; and, in the hurry of business in the garden in the spring, the ridges can be most expeditiously levelled for spring crops.

SLUGS—LIME.

In old garden grounds, infested with slugs, the application of lime is found by experience, the best expedient for their destruction.

BEANS

Can be transplanted with as much safety and success as the cabbage, or any other vegetable.

RHUBARB.

This is one of the many plants which a farmer may have in his garden, and which may be made to contribute to the delicacies of his table, and to the health and comfort of his family, with very little expense or labor. The plant is perennial and much resembles in its habits, the burdoc, though the leaves and stalks may be somewhat larger in a good soil. A dozen good plants will supply a family. The leaf stalks are the parts used. The skin or cuticle is pealed off—they are then cut into quarter or half inch pieces, and used without further preparation, with sugar and spices, like unripe gooseberries, for pies and tarts, which fruit it very much resembles in flavor. It may be used in spring, and until mid-summer. Medical men ascribe to it a salutary influence on health, particularly to children, when used in this way. The seed ripens about mid-summer, at which time it may be sown.—*Yankee Farmer.*

TO SALT BUTTER.

Beat very well up together in a marble mortar, half a pound of common salt, four ounces of powdered loaf sugar. To every pound of newly made butter (the milk being well drawed off by beating) put an ounce of the mixed powder; incorporate it well, and put the butter in pots for keeping. In about a month—not before—it will be fit for use; and it will continue for ten years as good as butter newly salted.

THE HESSIAN FLY.

A respected friend, an intelligent and practical farmer residing in Lancaster county, says: "Thinking that you would like to hear of something *new*, I requested the young man who farms for me to reduce to writing what he knew concerning the Hessian Fly. His reply is enclosed.* In my future efforts or attempts to destroy this pernicious insect, I design to pursue the following course; to have a roller made with six square sides. When drawn over my grain field in the spring, when the ground is moist and in a soft state, this roller must come down with the force of a pounder, and will most probably destroy the egg of the fly, which is very tender. I hope some of our intelligent and investigating farmers may improve upon this idea, and give us the results in the Farmers' Cabinet.

BRAND.

Every farmer or gardener should procure a brand, containing the letters of his name, with which to mark all his implements or tools; it will cost from a dollar and a half to two dollars, according to the number of letters on it. Those who are in the habit of loaning tools will soon find that a brand will save its cost in a short time.

For the Farmers' Cabinet.

Mode of refining Wine and Cider.

The secret revealed at last.

To refine wine or cider, take new, sweet, skim milk, that drawn at night and skimmed the following morning, or morning's milk skimmed at night; one pint to a quarter cask; pour it into the liquor to be refined, the *coldest weather* of winter, and stir it up thoroughly to incorporate it completely; let it settle and your work is done. The liquor will be pure and fine, and will have a peculiar richness imparted to it by the process. This mode of refining cider and wine has been long in use amongst extensive dealers in these liquors, and was obtained from a gentleman who had long practised it with great success and profit.

R.

The value of green vegetables as manure was strikingly proved by me in the spring of 1833. I had a trench opened of sufficient length to receive six sets of potatoes; under three of these sets I placed green cabbage leaves; but the other three had nothing but the soil. When the crop was dug up, the plants over the cabbage leaves yielded about double the produce of the others.

J. D. Parkes.

Dartfort Nursery, January, 1834.

Use well the moments which decide your fate.

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* The enclosure received and will be attended to.

For the Farmers' Cabinet.

Ancient Agricultural Societies.

After the Britons retired into Wales, it was enacted that no man should guide a plough who could not make one; and that the driver should make the ropes of twisted willows, with which it was drawn. It was usual for six or eight persons to form themselves into a society for fitting out one of these ploughs, providing it with oxen and every thing necessary for ploughing; and many curious laws were made for the regulation of such societies.

If any person laid dung on a field, with the consent of the proprietor, he was by law allowed the use of that land for one year. If the dung was carried out in a cart in great abundance, he was to have the use of the land for three years. Whoever cut down a wood, and converted it into arable, with the consent of the owner, he was to have the use of it for five years. If any one folded his cattle, for one year, upon a piece of ground belonging to another, with the owner's consent, he was allowed the use of the ground for four years. Thus, though the Britons had, in a great measure, lost the knowledge of agriculture, they appear to have been very assiduous in giving encouragement to such as would attempt its revival.

The above is furnished for the Cabinet as matter of curiosity, and to show the improvements made since these times of barbarism. If some of your numerous patrons or correspondents would take a little pains to collect and arrange the history of the early state of agriculture in this country, as practised by our ancestors, and which has no doubt been handed down by tradition in some of the old settlements, it would be both amusing and interesting to our young folks, and would fill a few pages of your instructive journal occasionally with great propriety.

S.

For the Farmers' Cabinet.

Distillation of Grain.

"All must be wrong that thwarts the one great end,
And all of God that bless mankind or mend."

There are many no doubt who directly or indirectly bless and mend mankind,—but there are many who for the sake of "filthy lucre" are constantly occupied in avocations which instead of yielding any benefit to their fellow men, are employed in that which tends to injure and to destroy them. Of this latter description I class those who are engaged in the business of manufacturing ardent spirits from *grain*, ("the staff of life,") and vending it for a common drink. I am credibly informed, and I believe it to be a fact, that there are three certain distillery establishments in and near this city in which not less than 1600 bushels of grain are daily converted into *Whisky!* 1600 bushels of grain would make 333 barrels of meal, and 333 barrels of meal would make 83,916 loaves of bread of one pound weight each loaf—a loaf of this weight is the whole allowance of bread to a man per day in the Moyamensing Prison, and none complain of it as being insufficient. It would therefore appear that the destruction of bread stuff each day by making it into whisky, would, if made into *Bread*, (a necessary article of food,) be sufficient to satisfy with *Bread*, 83,916 persons for one day! more than enough to supply all the poor and needy in this city and districts! But instead of being made into bread it is made into *Whisky!*—and what then! Why this whisky is to be disposed of, and for this purpose there are houses licensed and unlicensed, according to the estimate made by the Union Benevolent Society in 1836, about 2000 in the city and districts—and if so, there are 2000 persons making it a business to hand out this destructive article—a business which I think they cannot very easily persuade themselves is calculated to "bless or mend mankind!" It has been remarked that these are generally worthless idle persons; and I believe this to be true; but the fruits of their *doings* are very obvious in our streets, alms house, &c. I have thought that if the signs over their doors were changed from "Tavern" to "*Paupers and Beggars made here*," they would give a more definite and striking idea of their utility! Suppose this vast quantity of grain were converted into bread instead of *whisky*, would not the price of flour be lessened, and would not this needful article of food come cheaper to the poor! And who would be the losers by this change! The very persons who are now making such unrighteous gain out of the poor and laboring classes of the community. But would the community suffer by this change? I trust no observing, reflecting, sober man, will answer in the affirmative. What would be the probable effect of a total abstinence from the use of this destructive article? would not men become more sober, rational, and industrious! —would not thousands be rescued from intemperance, pauperism, and untimely death! —would not quarrels, assault and batteries, and murders be fewer?—would not the business of constables, watchmen, magistrates, grand juries and courts be lessened?—would not our prisons and alms house be greatly relieved of their inhabitants, and the public of an enormous poor tax, amounting this year to between 2 and 300,000 dollars?—would not the manners, habits, and education of the rising generation be improved by the change,

and would not thousands of abused and suffering wives have cause to rejoice in the reformation of intemperate husbands, and the fathers of neglected children? It appears by the report of the Benevolent Society above mentioned, there were in the city proper twelve distilleries—out of these twelve, it will be remembered, I give an account of the doings of but three; so that 400 barrels of whisky, the quantity these three make, is by no means all the liquor made daily in the city and districts.

Knowing these facts, can we, ought we to remain idle spectators of this work of devastation, and of ruin to our fellow creatures? Ought not efforts to be made to prevent the distillation of grain into whisky, and the licensing of taverns, and dram-shops, and oyster cellars where liquors are sold?

INQUIRER.

Philada., 12th mo. 28, 1838.

Remedy for Burns.

To the Editor of the United State Gazette.

Dear Sir,—I have so often seen remedies for human ills given in the newspapers, and then at once consigned to oblivion, that I have for a great while hesitated to present this remedy to the public. For fourteen years I have prescribed it, and witnessed its healing effects. I deliberately say, from fourteen years experience, that no disease or injury to the human system has a more certain remedy than this for the most distressing of all injuries, that of scalds and burns. The relief is almost instantaneous; from a minute or two to a half an hour, will usually find a full relief from pain. No matter the extent of the burn, even if all the skin is removed from the body. The first knowledge I had of it was the almost miraculous cure of a little boy, who fell into a half hogshead of boiling water, prepared for scalding the bristles from swine. The entire person and limbs of the boy passed under the scalding water up to the chin, so as to scald his whole neck. On removing his clothes, nearly all his skin followed from his neck, hands, arms, chest, back, abdomen, and almost every bit of skin from his extremities. In this deplorable condition, literally fllayed alive with scalding water, the remedy was promptly applied as a momentary application until the physicians should arrive. , Two eminent physicians soon came, and on learning the extent of the scald, pronounced it a certainly fatal case, and directed the boy to remain with the remedy over him until he should die. In six weeks he was restored quite well, with scarcely a scar on any part of his person or limbs. The remedy increases in value from the fact, that under almost all circumstances it may be obtained. It is as follows:—Take soot from a chimney where wood is burned, rub it fine, and mix one part soot to three parts or nearly so of hog's lard, fresh butter, or any kind of fresh grease, *that is not salted;* spread this on linen or muslin, or any cotton cloth for easier and more perfect adaptation. If in very extensive burns or scalds, the cloth should be torn into strips before putting over the scald. Let the remedy be freely and fully applied, so as to perfectly cover all the burned parts. No other application is required until the patient is well, except to apply fresh applications of the soot and lard, &c.

In steamboat explosions, this remedy can in nearly all cases be at once applied, and if done many valuable lives will be saved, and a vast amount of suffering alleviated.

If you and the corps editorial, will hand the remedy around our country, and invite attention to it, and that also those who use it may give their testimony for or against, I feel assured that in a few months, this most efficacious and almost unfailing remedy will be every where known and used in the United States.

A PHYSICIAN OF PHILADELPHIA.

The Work goes on.

We learn with pleasure that a meeting was held on the third December, in the town of Enfield, Conn., at which ALPHEUS BILLINGS, Esq., presided, and GEO. TERRY, Esq. officiated as Secretary. The object of the meeting being stated in a pertinent address by JABEZ COLLINS, Esq., the following resolution was offered and unanimously adopted: *Resolved*, That this Society shall be known as the Agricultural, Horticultural and Manufacturing Society of the towns of Enfield, Summers and Ellington.

Sugar Beets.

JOHN PALMER, of Lower Makefield township, Bucks county, Pa., notwithstanding the uncommon drought of the last season, raised a fine crop of Sugar Beets, one of which weighed nineteen pounds and three quarters.

A similar crop of Beets was also raised in the neighborhood of Fallsington, in the same county, by JONATHAN PALMER, one of which weighed eighteen pounds and three quarters. Well done old Bucks!

A stalk of the Chinese Corn, grown by Grant Thorburn, Esq., may be seen at the Horticultural establishment of Messrs. Hirst and Dreer, No. 97 Chesnut street, where we are requested to say the seed may be obtained.

Quantity of rain which has fallen in each month since January 1, 1838.

	Inches.
1st month,	2.20
2d month,	2.19
3d month,	3.17
4th month,	3.58
5th month,	3.57
6th month,	6.60
7th month,	2.37
8th month,	2.78
9th month,	9.51
10th month,	4.89
11th month,	3.35
12th month,	1.04
	45.25

Philadelphia, Jan. 1, 1838.

By reference to page 186, vol. ii. of Farmers' Cabinet, it will be seen that the average quantity which fell annually for twenty-eight years, was 36.99 inches—consequently the rain fallen this year, (1838,) was 8.26 inches above the annual average.

We have not received the proceedings of the Chester and Delaware county Cattle Show as promised.

Errata. Last number, page 144, article Morus Multicaulis, last line, for "to have exclusive plantations," read "not to have exclusive plantations.

A Farmer.

Wanted.—An *industrious*, capable farmer—one who understands the duties of the *farm-yard*, as well as the labors of the *field*. To a pains taking, competent person, a respectable salary will be given, or a share in the proceeds, as an equivalent.

The farmer required by the advertiser is not merely a laborer who can plough, sow, &c.&c., but one who can do all these *well*, and is also qualified to direct others in their work, and to carry out all of the operations required on a respectable farming establishment.

The applicant may be either with or without a family—the only requisites required are *capability* and *character*, but these must be unquestionable.

Applications, with references and recommendations, will be received at this office until the 1st of April next.

Philadelphia, Dec. 4th, 1838.

Mulberry Trees.

WM. PRINCE AND SONS will make sales of trees and cuttings of the *genuine Chinese Morus Multicaulis, Morus Expansa, Alpine, Brousse, Canton*, and other varieties, deliverable to the purchasers at such period in the spring as is convenient to them, and will enter into contracts accordingly. Prices and terms for the Trees and Cuttings will be forwarded to all who may apply for them by mail. as well as prices of Silk Worm's Eggs, Mulberry Seeds, &c. The Multicaulis Trees are remarkably vigorous, and as we first imported the genuine tree, purchasers are sure of obtaining the true kind. It is from this cause, and from the great attention paid by them, that the trees they have sold have given universal satisfaction.

Flushing, near New York, Jan. 1, 1839.

Prices Current—January 7.

FLOUR, PER BARREL.	
Pennsylvania and Brandywine	$8 00 a 8 50
Western	7 75 a 8 00
Scraped	7 75 a 8 00
Middling	1 00 a 0 00
Rye Flour	5 00 a 0 00
Corn Meal	3 62 a 0 00
Buckwheat Meal. per cwt	2 25 a 2 75
GRAIN, PER BUSHEL.	
Wheat, Pennsylvania	$1 70 a 1 75
——— Southern	1 70 a 1 75
Rye, Penna.	1 00 a 1 10
—— Southern	1 00 a 1 10
Corn, Penna. round yellow,	85 a 86
—— Southern, yellow	84 a 86
—— White	82 a 84
Oats, Penna.	46 a 50
—— Southern	40 a 42
Barley, Eastern	1 19 a 1 25
——— Penna.	0 00 a 0 00
Peas	88 a 1 12
Beans, white	1 50 a 1 75
PROVISIONS.	
Beef, mess	$15 00 a 16 00
—— prime	10 00 a 10 00
Pork, mess	22 00 a 25 00
—— prime	19 00 a 20 00
Bacon, western, per lb	12½ a 13½
Hams, Jersey	14 a 15
——— Western	12 a 14
Butter, extra keg, No. 1	17 a 20
Cheese, country	8½ a 9½
Lard, western	12 a 13
Philadelphia	12½ a 13
Jersey	13 a 14
WOOL, PER POUND.	
Prime Saxony	50 a 58
American full blood	45 a 52
——— ¾ blood	42 a 45
——— ½ blood	39 a 41
——— ¼ blood and common	35 a 37
Lamb's sup. pull	45 a 50
Do. Nos. 1, 2, and 3.	33 a 45
Hay, Timothy, per 100 lbs	85 a 1 00
Clover	75 a 90
Hemp, American dew rot, per ton	$145 00 a 150 00
Hops, per lb. 1838, prime	18 a 20
Plaster of Paris, per ton	$ 3 50 a 4 00
Clover Seed, per bushel	12 00 a 13 00
Flax Seed, rough	1 75 a 1 81
Timothy Seed	2 75 a 5 25
Herd Grass, or Red Top	0 62 a 0 75
Orchard Grass	2 00 a 2 50
Sumac, American, per ton	35 00 a 37 50
Tallow, American, per lb	11 a 11½
NEW YORK—January 5.	
Flour, per barrel	$8 50 a 9 00
Wheat, per bushel	1 80 a 1 85
Corn, per bushel	90 a 95
Rye, per bushel	1 00 a 1 10
Oats, per bushel	50 a 58

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